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AastraLink Pro 160

Administrator Guide

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Preface

About This Guide

Introduction

This guide provides information about the AastraLink Pro 160, and is intended for the system administrator who installs, configures, manages, maintains, and troubleshoots the unit.

The AastraLink Pro 160 is a Linux-based hardware unit that hosts the Asterisk open source Private Branch Exchange (PBX) software. You can use the AastraLink Pro 160 in small to medium Business, and Enterprise environments.

Other Documentation

The AastraLink Pro 160 documentation set also includes:

- *AastraLink Pro 160 Quick Start Administrator's Guide* - contains AastraLink Pro 160 installation and setup instructions. Describes how to install and register the Administrator IP phone, as well as instructions for how to access the AastraLink Web UI.
- *AastraLink Pro 160 Quick Start User's Guide* - Describes how to initially install user IP phones on your network, and how to register user IP phones with the AastraLink device.
- *AastraLink Pro 160 IP Phone User's Guide* - Designed for an Aastra IP phone end-user. Explains how to use the IP phone UI, or the AastraLink Web UI, to operate your IP phone on an AastraLink IP phone network.

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Chapter 1
Getting Started

Overview

Congratulations!! You have purchased a highly functional, cost-effective, easy-to-use AastraLink Pro 160 for use in your Enterprise network.

The AastraLink Pro 160 is Linux-based hardware that hosts the Asterisk open source Private Branch Exchange (PBX) software. The AastraLink Pro 160 acts as a private telephone network (or PBX) within an enterprise. Users of the AastraLink Pro 160 can direct dial internal extensions via the Voice over IP (VoIP) network. They can also share a number of outside lines for making telephone calls external to the AastraLink Pro 160.

The AastraLink Pro 160 is easy to install and operate, and provides a comprehensive set of security features you would expect from a state-of-the-art PBX.

The AastraLink Pro 160 is compatible with these Aastra IP phones:

- **9143i, 9480i, 9480i CT SIP IP Phones**
- **5i Series SIP IP Phones:** 51i, 53i, 55i, 57i, 57i CT, 536M, and 560M.

What Does the AastraLink Pro 160 Do?

The AastraLink Pro 160 provides full PBX functionality, including:

- Local SIP extensions, remote SIP users, SIP trunking
- Flexible voicemail with visual voicemail menus
- Operator console
- Custom announcements
  - Auto-attendant (AA) with day/night/holiday scheduling with customizable Open and Closed Greetings, Main Menu prompts, Key Announcements, and Language Greetings (English, French, Spanish).
- Interactive Voice Response (IVR) with directory number and name dialing, and ability to disable the dial-by-name feature
- 3-way conference calls (3WC)
- Busy lamp field monitoring (BLF)
- Flexible call forwarding (CFB, CFNA, CFA)
- Find-me, Follow-me (FMFM)
- Call Park
- Call/user groups with user group overflow feature and group member email notifications of new group voicemails
- Remote call pickup
- Barred numbers
- Abbreviated Numbers and Shortcut Dialing
- Custom speed-dial
- User-configurable ring tones and Administrator-configurable distinctive ring
- Up to 6 Foreign Exchange Office (FXO) ports for connection to analogue public telephone lines (PSTN). Each FXO is equipped with on-hook CallerID detection and full G.168 echo cancellation. Also provides far-end FXO disconnect supervision.
- Universal Plug-and-Play (UPnP) integration for easy setup of gateway/router and local network discovery from Microsoft Windows PCs.

Additional AastraLink Pro 160 features/functionality includes:

- Ability to generate call detail records (CDRs) for external billing applications.
- Ability to store calling line ID (CLID) and calling name ID (CNID) in the missed calls and callers list.
- Ability to network multiple AastraLink Pro 160 platforms across a LAN/WAN (identified by an IP address, public Internet name, or domain name service (DNS)).
- Provides a local dialing plan and the ability to define user dialing restrictions.
- Provides multiple simultaneous SIP trunk support for incoming SIP trunks.
- Offers “music on hold” feature that supports playing analog from an external input source, or digital from an uploaded *.wav* file.
- Provides an overhead paging port for connection to an amplifier.
- Provides a dedicated Foreign Exchange Station (FXS) port for connection to a FAX machine.
- Provides a dedicated FXS port for connection to an emergency analog phone in case of power failure.
- Provides an input/output (I/O) port for relay output (activated by dialing an internal directory number (DIRN)).
- Provides an input connection that can trigger an event notification on the AastraLink Pro 160. A triggered event can be sent as an email, Extensible Markup Language (XML) message sent to the phone UI, or as a recorded prompt for voice notification.
- System-wide SIP paging to all registered phones
- Provides easy configuration using an administrator Web interface (Web UI).
- Ability to add multiple phones from a pre-defined User list (*.csv* file) via a bulk-update mechanism
- Support of inbound Direct Inward Dialing (DID) for SIP trunks (allows bypass of IVR menus)
- Provides email notification to Administrator when a remote user attempts access to the AastraLink Pro 160.
- Ability for the Administrator to backup/restore the AastraLink Pro 160 platform using a Backup file (*.abf* file).

- Ability for the Administrator to reboot multiple phones via the Web UI.
- Display of AastraLink Pro 160 status from Web UI during boot/reboot.
- Ability for Administrator to email AastraLink status and system config/debug information to Aastra Support.

How Do I Set Up My AastraLink Network?

This section describes what you need to do to set up your AastraLink network. It describes required tasks, as well as optional tasks.

The figure below shows a typical AastraLink Pro 160 network. An AastraLink network is comprised of an AastraLink Pro 160, and the Aastra IP phones that are registered with it.

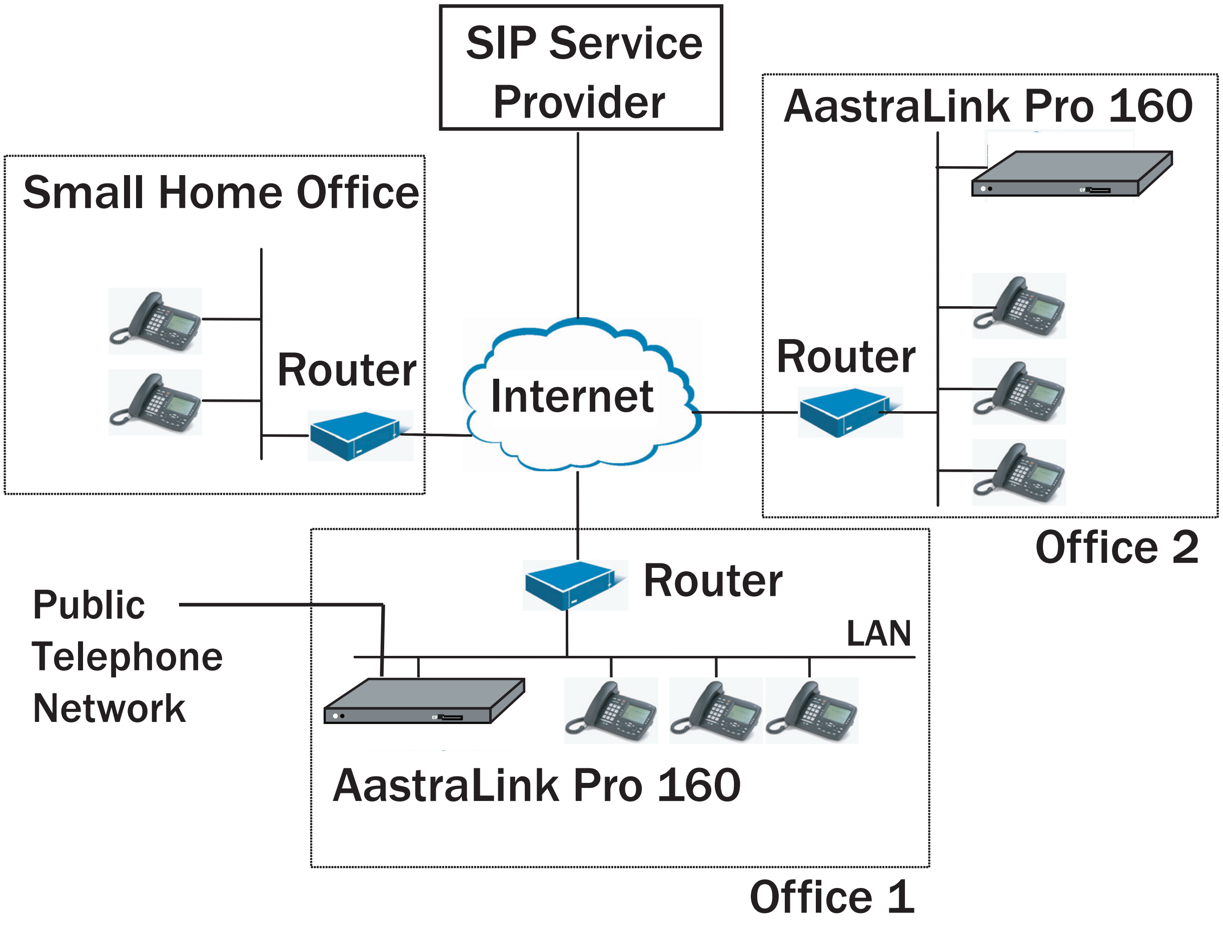

SIP Service Provider
Small Home Office
Router
Internet
AastraLink Pro 160
Router
Office 2
Public Telephone Network
Router
LAN
AastraLink Pro 160
Office 1

Figure 1-1. **Sample AastraLink Pro 160 Network**

Required Tasks

Setting up your AastraLink network is a three-step process as described below. Once you complete these three steps, the AastraLink Pro 160 and the Aastra IP phones on your network are fully operational, handling calls and processing data.

Step	Action	Refer To
1	Connect the AastraLink Pro 160 to your network (Administrator task.)	*Quick Start Administrator's Guide*
2	Install and register an administrator IP phone with the AastraLink Pro 160 device. (Administrator task.) • The first phone you register on a newly installed AastraLink Pro 160 is automatically configured as the Administrator phone, and is assigned as the Operator.	*Quick Start Administrator's Guide*
3	As administrator, you can configure and manage the phones and the AastraLink Pro 160 device on your network (including reassigning User/Admin/Operator privileges).	*See "Users and Privileges" on page 1-13*
4	Install and register user IP phones with the AastraLink Pro 160 device. (Administrator or User task.) • Enter the name/password for the user during IP phone initialization. • The AastraLInk automatically assigns the next free extension to the new phone.	*QuickStart User's Guide*

Optional Tasks

To customize your AastraLink network use the instructions described in this *AastraLink Pro 160 Administrator Guide* to:

- (Administrator's Phone) Configure call settings and view/delete call lists, view/delete voicemails, define additional softkeys, add directory contacts, modify user profiles, configure voicemail, or change your Administrator password.
- (User Phones) View/add User phones, reboot User phones, upload pre-specified User list (from *.csv* file), specify user groups, define additional softkeys on User phones in your network.
- View and configure AastraLink system settings, network settings, dial plan settings, VoIP settings, and/or Auto-Attendant settings.
- Perform maintenance, backup, and upgrade procedures.
- Register remote user phones.

What Does the AastraLink Web UI Allow Me To Do?

As administrator, you can use the AastraLink Pro 160 Web UI to:

- Configure and manage your own phone (make calls, handle calls, and enable features).
- Configure and manage the IP phones on the AastraLink network (define user profiles, configure default softkeys, manage phone directories, etc.).
- Configure, manage, and maintain the AastraLink Pro 160 device.

As an IP phone user, you can use the AastraLink Pro 160 Web UI to:

- Manage and configure your phone only.

Can I Still Use the Phone UI?

All administrative functions are done using the AastraLink Pro 160 Web UI. However, IP phone users can use either the Web UI, or the Aastra IP phone UI, to operate and configure their IP phones.

The following table shows the options available using the AastraLink Pro 160 Web UI and the Aastra IP phone UI.

Phone Option	**Access From Web UI**	**Access from Phone UI**
Dial a number	✔	✔
Manage your recent calls	✔	✔
Manage and use your phone directory	✔	✔
Configure Administrator phone softkeys	✔	

Phone Option	**Access From Web UI**	**Access from Phone UI**
Enable phone features • Do Not Disturb • Call Forwarding • Find Me, Follow Me	 ✔ ✔ ✔	 ✔ ✔ ✔
Edit your Administrator preferences • Contact Information • Voicemail Preference • Change Password	 ✔ ✔ ✔	
Set phone preferences • Contrast Level • Set Audio (not available for 51i)		 ✔ ✔
View phone IP Address.	✔	✔
View AastraLink IP Address	✔	✔
View phone firmware version	✔	✔
Set phone to factory default settings		✔
Restart phone	✔	✔
Lock your phone		✔
Configure User profiles: • User preferences • Ring groups • Default softkeys	✔	
Configure AastraLink network and system parameters	✔	
Configure Dial plan Settings	✔	
Configure VoIP settings	✔	
Configure Auto-attendant	✔	
Perform AastraLink system upgrade, backups, and maintenance tasks	✔	

AastraLink Pro 160 Emergency Call Support

Because IP phones and data networks require power to operate, they do not provide the fail-safe emergency calling capability of a traditional analogue phone. The AastraLink Pro 160 supports emergency calling in two ways:

- Lifeline Phone
- Emergency Call Priority

These features are described in detail in the next sections.

Lifeline Phone

The FXO Line 1 and FXS Phone B ports are labelled —♥— on the rear of the AastraLink unit. These ports provide capability for calling emergency services (also known as E911 in North America). In the event of power failure, the AastraLink Pro 160 hardware connects these two ports directly together, so that you can make an emergency call on FXO Line 1 using an analogue phone connected to the FXS Phone B port.

To ensure emergency call routing is available, we recommended that:

- You connect a traditional analogue phone to FXS B at all times, labelled as the E911 Lifeline emergency phone.
- When connecting telephone lines, connect the LifeLine FXO port first.

Emergency Call Priority

When the AastraLink Pro 160 is active, and an emergency call (by default, 911 or 9911 in North America) is made from an IP phone, it is preferentially routed to any available FXO line. If all FXO lines are in use, AastraLink Pro overrides any existing non-emergency call in progress on the Lifeline FXO and routes the emergency call in its place. Emergency Call Priority Override may take up to 15 seconds for the existing call to be cleared; an announcement plays during the override operation.

You can use the Web UI to provision emergency call numbers.

Emergency Call Support Important Notes

Note: The AastraLink Pro 160 guarantees only one emergency call at a time. If multiple emergency calls are attempted, callers may receive a message stating that all circuits are busy. A call placed from a phone connected to FXS B receives the highest priority; it will not be terminated, even by another 911 call. If a 911 call is made, and the only available FXO line is already in use by a phone connected to FXS B, then the AastraLink will attempt to place the 911 call using SIP trunking.

Warning: On remote phones connected to the AastraLink Pro 160, the following emergency related message displays: **“E911 calls are not available from this phone.”** Remote IP phone users should **not** make emergency calls using the AastraLink Pro 160, because the location information will be incorrect. E911 regulations in the United States require street address location information be transmitted to the Public Safety Answering Point (PSAP). This information is provided by the telco, using the location of the analogue line connected to the AastraLink Pro 160 Lifeline port (FXO Line 1).

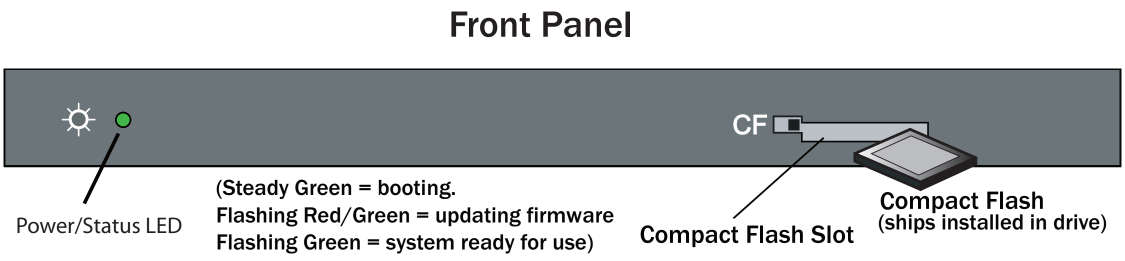
AastraLink Pro 160 Hardware and Software

Hardware Requirements

Hardware	Minimum requirements
AastraLink Pro 160	Includes: • One AastraLink Pro 160 unit. • One 12V AC power adapter and cable. • One RJ45 Ethernet cable. • Six RJ11 phone cables. • One 512 MB CompactFlash memory card. • One set of rack mounting brackets with four Phillips head screws. • One wall mounting template, 3 plastic wall anchors, and 3 Phillips panhead screws. • One Quick Start Administrator's guide.
Additional Equipment required (but not included)	At least one Aastra IP Phone. The Aastra IP phones and expansion modules supported in this release include these models: • 9143i • 9480i, 9480i CT • 51i • 53i • 55i • 57i, 57i CT • 536M, 560M

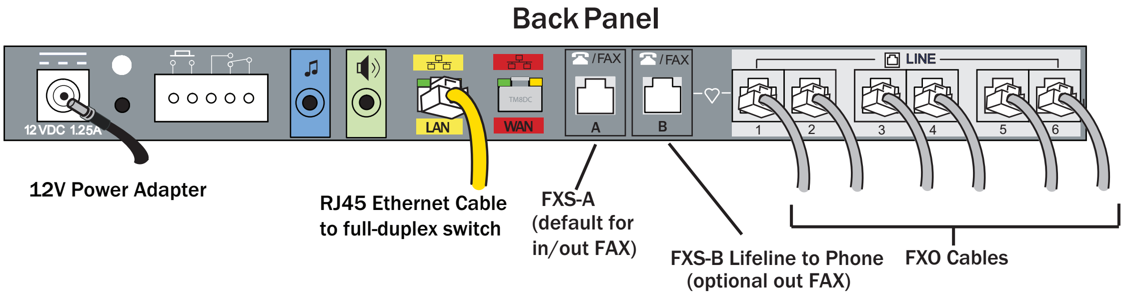
Note: IP Phone Model 53i supports the 536M. IP phone Models 55i, 57i, and 57i CT support the 536M and the 560M. Daisy-chained expansion modules are not recognized by the AastraLink Pro 160. The AastraLink Pro 160 supports a maximum of one expansion module per phone.

Front of AastraLink Pro 160


Front Panel
CF
Power/Status LED
(Steady Green = booting.
Flashing Red/Green = updating firmware
Flashing Green = system ready for use)
Compact Flash Slot
Compact Flash
(ships installed in drive)

Note: See *"Monitoring the AastraLink Status LED"* on page 7-3 for additional LED descriptions.

Back of AastraLink Pro 160


Back Panel
12VDC 1.25A
LAN
WAN
/FAX
A
/FAX
B
LINE
1
2
3
4
5
6
12V Power Adapter
RJ45 Ethernet Cable
to full-duplex switch
FXS-A
(default for
in/out FAX)
FXS-B Lifeline to Phone
(optional out FAX)
FXO Cables

Software Requirements

The following table provides the minimum software you need to use the AastraLink Pro 160 Web-based graphical user interface (Web UI).

Software	Minimum requirements
Web browser	A Web browser capable of Javascript, specifically Internet Explorer 6 and 7, Firefox 1.5 and 2, Opera 9, and Safari 2 and 3
DHCP server (optional)* *If DHCP is not available, ZeroConf is used instead. Static IP may also be provisioned after initial configuration is completed.	DHCP server providing one IP address (for example, 192.168.0.1/24)
FTP, TFTP or HTTP server.	Required only if recovery mode is used

Users and Privileges

The AastraLink Pro 160 supports two types of users: administrators and registered users, as follows:

- Administrators have access privileges to all AastraLink Pro 160 management features and functions. Administrators can manage and configure their phones, user phones, and manage and maintain the AastraLink Pro 160 device.
- Registered users can manage and configure their phones only.

You can also specify a person from either group (administrator or user) as “Operator.” The Operator has access to operator specific keys and the office voice mailbox. The administrator is also the designated Operator, by default.

Reference Documentation

For additional information about installing the AastraLink Pro 160, and installing and operating the Aastra IP phones in your network, see the following guides:

- *AastraLink Pro 160 Quick Start Adminstrator's Guide*
- *AastraLink Pro 160 Quick Start User's Guide*
- *AastraLink Pro 160 IP Phone User's Guide*

Chapter 2
Using the AastraLink Pro 160 Web UI

About this Chapter

Introduction

This chapter describes how to use to the AastraLink Web UI to configure and manage the AastraLink Pro 160 and the Aastra IP phones on your network.

Topics

This chapter covers the following topics:

Topic	Page
Accessing the AastraLink Web UI	page 2-2
Using Your Web Browser to Access the AastraLink Web UI	page 2-2
Using Windows Explorer to Access the AastraLink Web UI	page 2-4
Administrator Menu Options	page 2-6
My Phone	page 2-11
Users	page 2-33
Configuration	page 2-34
Maintenance	page 2-36

Accessing the AastraLink Web UI

This section describes how to use your web browser to access the AastraLink Pro 160 Web UI. You can login as an administrator, or as a user, as follows:

- Administrators have access privileges to all AastraLink Pro 160 management features and functions.
- Users can manage and configure their phones only.

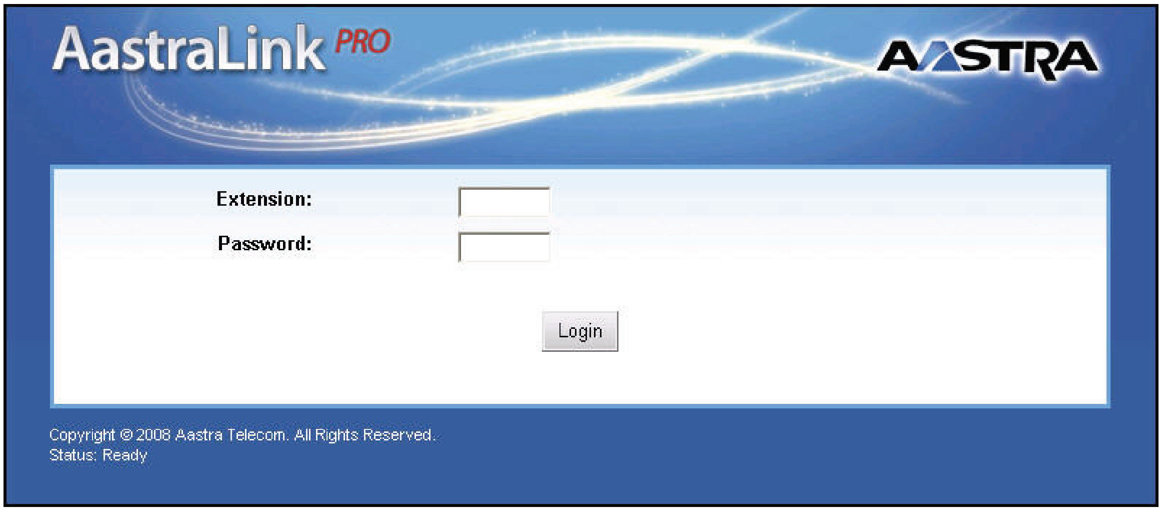
There are two ways you can access the AastraLink Web UI:

- Enter the IP address of the AastraLink Pro 160 directly into the address field of your web browser, or
- Use Universal Plug-and-Play (UPnP) and Windows Explorer to locate the AastraLink Pro 160 on your network.

Using Your Web Browser to Access the AastraLink Web UI

The following procedure describes how to access the AastraLink Web UI.

Step	**Action**
1	Open your web browser and enter the IP Address or DNS hostname of the AastraLink Pro 160 in the address field. For example: http://10.20.50.135 **Note:** If you do not know the IP Address of the AastraLink, you can access it using an IP phone connected to the device. For instructions, see How Do I Obtain the IP Address Assigned to the AastraLink Pro 160? on page 6-8 of this guide. The AastraLink Web UI Login Menu appears (Figure 2-1).
2	Enter your phone extension, and password, and click Login The AastraLink Main Menu appears (Figure 2-3). **Note:** To log out, click **<logout>**, located in the upper right corner of the main menu.


AastraLink PRO
AASTRA
Extension:
Password:
Login

Copyright © 2008 Aastra Telecom. All Rights Reserved.
Status: Ready

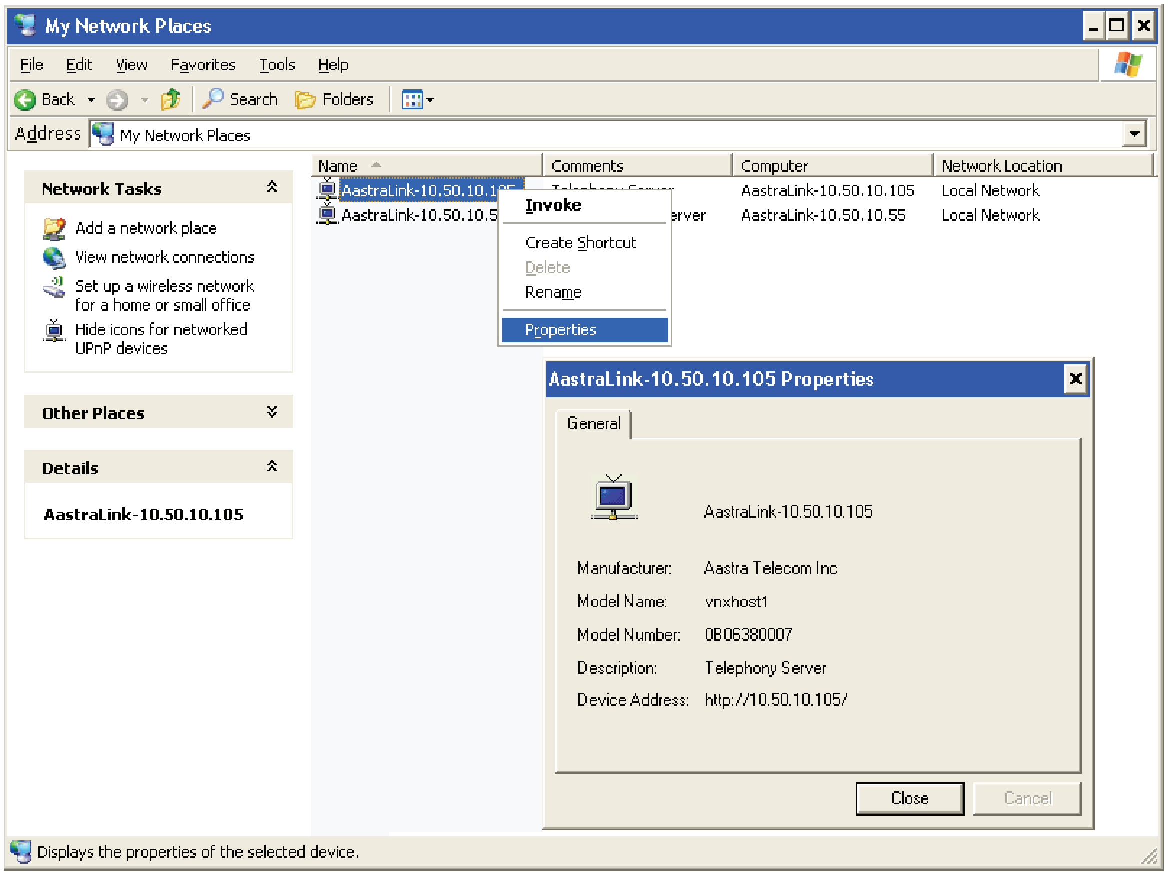
Figure 2-1. AastraLink Web UI Login Menu

Using Windows Explorer to Access the AastraLink Web UI

The following procedure describes how to use Windows Explorer to access the AastraLink Web UI.

Note: Prior to using this method to discover the AastraLink on your network, the Windows UPnP networking component must be installed on your computer.

Step	Action
1	Click on the **Start** menu, then click on **My Network Places.** Providing that your computer is UPnP enabled, then the AastraLink Pro 160 device icon appears in the My Network Places window. The IP Address assigned to the AastraLink device is listed. If there are multiple AastraLinks in your network, right-click the UPnP device icon and select Properties. A dialogue box appears that shows the IP address, serial number and hostname (model) of the selected device (Figure 2-2).
2	To access the AastraLink Web UI, double-click on the AastraLink device icon. A web browser launches and the AastraLink log in menu appears (Figure 2-1).
3	Enter your phone extension, and password, and click Login The AastraLink Main Menu appears (Figure 2-3). **Note:** To log out of the AastraLink Web UI, click **<logout>**, located in the upper right corner of the main menu.


My Network Places
File
Edit
View
Favorites
Tools
Help
Back
Search
Folders
Address
My Network Places
Network Tasks
Add a network place
View network connections
Set up a wireless network for a home or small office
Hide icons for networked UPnP devices
Other Places
Details
AastraLink-10.50.10.105
Name
Comments
Computer
Network Location
AastraLink-10.50.10.1
AastraLink-10.50.10.5
erver
AastraLink-10.50.10.105
AastraLink-10.50.10.55
Local Network
Local Network
Invoke
Create Shortcut
Delete
Rename
Properties
AastraLink-10.50.10.105 Properties
General
Close
Cancel

AastraLink-10.50.10.105

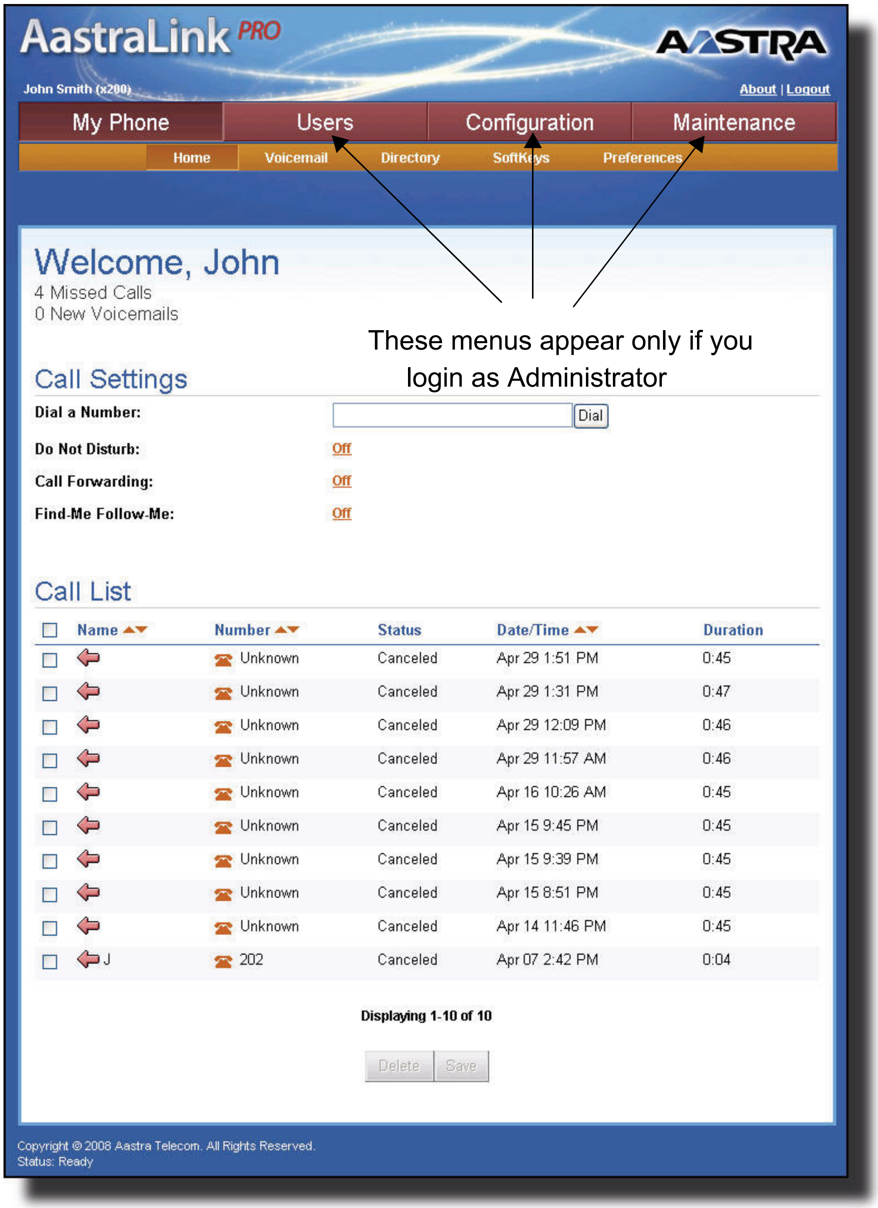
Manufacturer: Aastra Telecom Inc
Model Name: vnxhost1
Model Number: 0B06380007
Description: Telephony Server
Device Address: http://10.50.10.105/

Displays the properties of the selected device.

Figure 2-2. **My Network Places Window**

Administrator Menu Options

When you are logged in as administrator, you can use the AastraLink Web UI to configure your own phone, other Aastra IP phones, and the AastraLink device. The following illustration shows the AastraLink Main Menu after an administrator logs in.


AastraLink PRO
AASTRA
John Smith (x200)
About | Logout
My Phone
Users
Configuration
Maintenance
Home
Voicemail
Directory
SoftKeys
Preferences

These menus appear only if you login as Administrator

Welcome, John
4 Missed Calls
0 New Voicemails

Call Settings

Dial a Number: Dial
Do Not Disturb: Off
Call Forwarding: Off
Find-Me Follow-Me: Off

Call List

☐	Name	Number	Status	Date/Time	Duration
☐		Unknown	Canceled	Apr 29 1:51 PM	0:45
☐		Unknown	Canceled	Apr 29 1:31 PM	0:47
☐		Unknown	Canceled	Apr 29 12:09 PM	0:46
☐		Unknown	Canceled	Apr 29 11:57 AM	0:46
☐		Unknown	Canceled	Apr 16 10:26 AM	0:45
☐		Unknown	Canceled	Apr 15 9:45 PM	0:45
☐		Unknown	Canceled	Apr 15 9:39 PM	0:45
☐		Unknown	Canceled	Apr 15 8:51 PM	0:45
☐		Unknown	Canceled	Apr 14 11:46 PM	0:45
☐	J	202	Canceled	Apr 07 2:42 PM	0:04

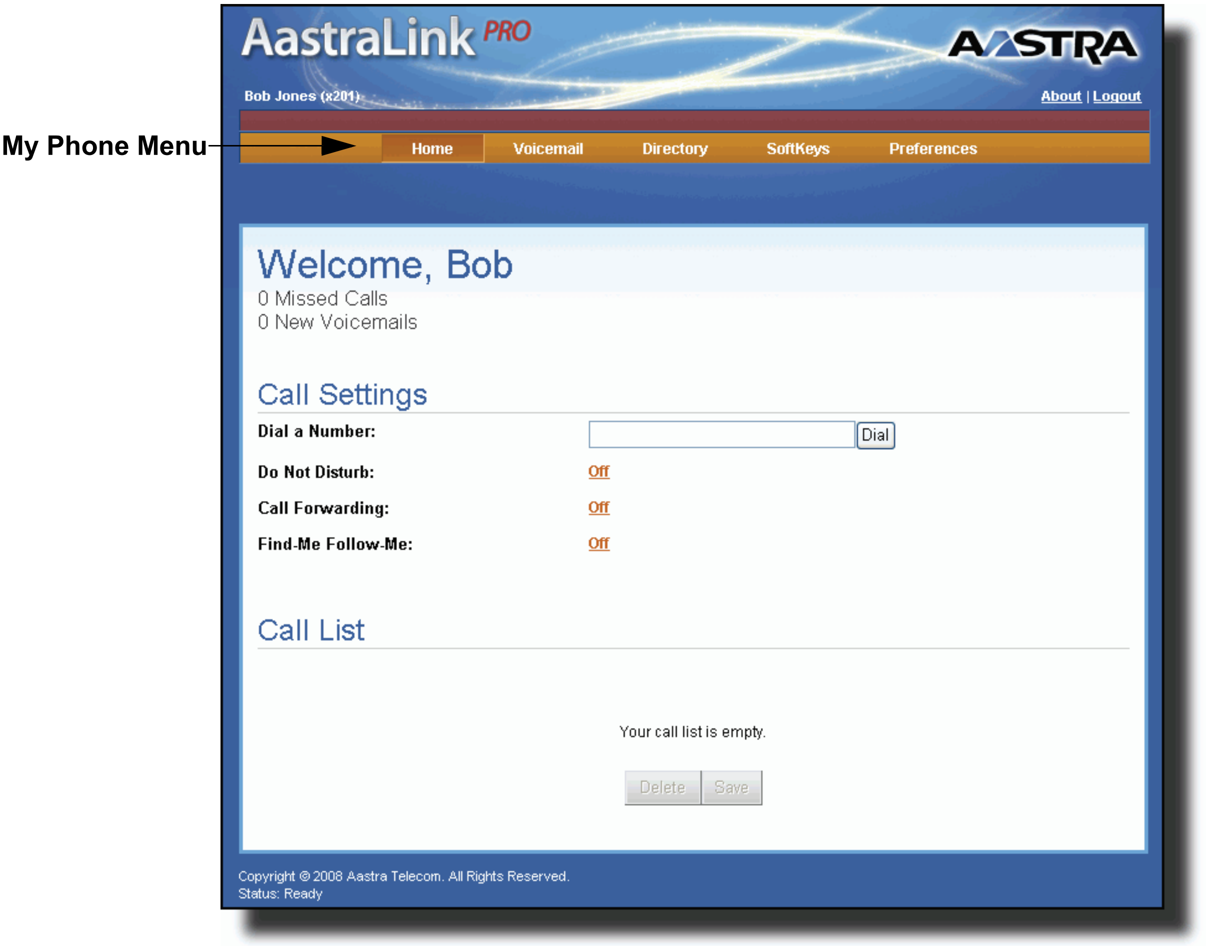
Displaying 1-10 of 10

Delete
Save

Copyright © 2008 Aastra Telecom. All Rights Reserved.
Status: Ready

Figure 2-3. AastraLink Administrator Main Menu

The following illustration shows the AastraLink Main Menu after a User logs in. A User menu displays the My Phone menu and submenus only.


AastraLink PRO
AASTRA
Bob Jones (x201)
About | Logout
Home
Voicemail
Directory
SoftKeys
Preferences
Dial
Delete
Save

My Phone Menu

Welcome, Bob
0 Missed Calls
0 New Voicemails

Call Settings

Dial a Number:
Do Not Disturb: Off
Call Forwarding: Off
Find-Me Follow-Me: Off

Call List

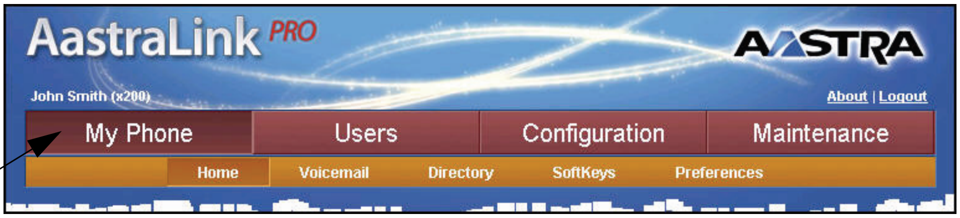
Your call list is empty.

Copyright © 2008 Aastra Telecom. All Rights Reserved.
Status: Ready

Figure 2-4. AastraLink User Main Menu

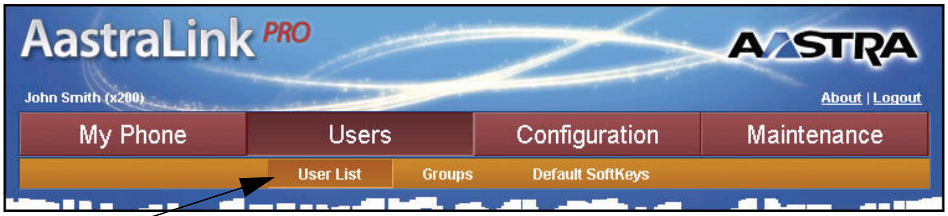
The Administrator Web UI is set up for easy navigation with various menus and a color-coded 3 level structure.

The first level menus (red) are the main task/activity items (**My Phone, Users, Configuration, Maintenance**). The first level menus do no change.


AastraLink PRO
AASTRA
John Smith (x200)
About | Logout
My Phone
Users
Configuration
Maintenance
Home
Voicemail
Directory
SoftKeys
Preferences

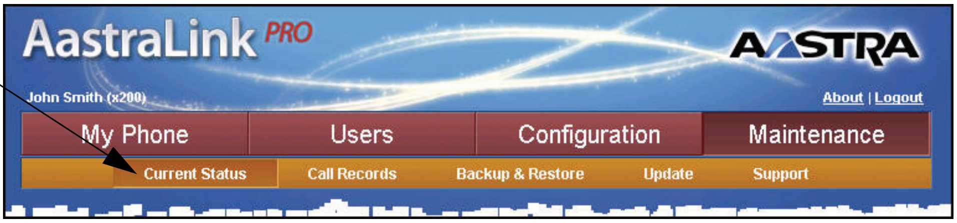
First level menus

The second level menus (amber) are the subsystem/category items. These menus change according to the first level menu selected.The following illustrations show the second level menus for the **Users** Menu and the **Maintenance** Menu.


AastraLink PRO
AASTRA
John Smith (x200)
About | Logout
My Phone
Users
Configuration
Maintenance
User List
Groups
Default SoftKeys

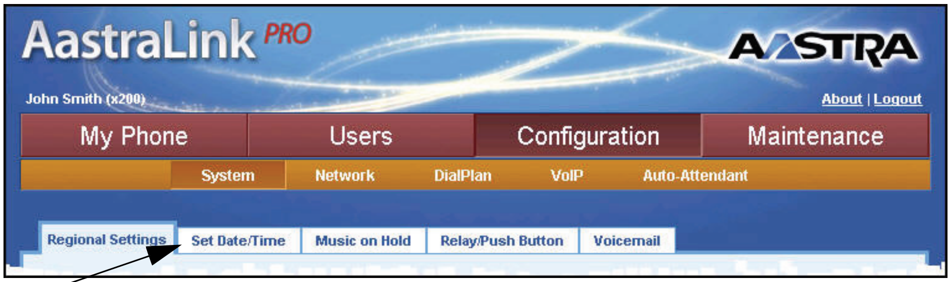
Users Menu and Submenus

Second level menus are different depending on first level menu selected


AastraLink PRO
AASTRA
John Smith (x200)
About | Logout
My Phone
Users
Configuration
Maintenance
Current Status
Call Records
Backup & Restore
Update
Support

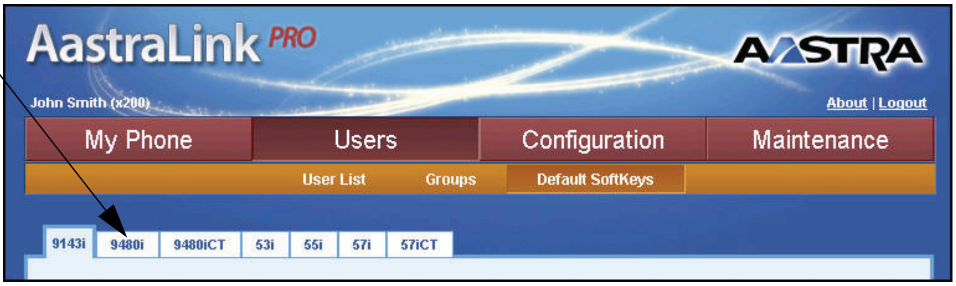
Maintenance Menu and Submenus

The third level menus (white) are tabs within the second level menus. These tabs change according to the second level menu selected. The following illustrations show the tabbed items on the **Configuration->System** Menu and the **Users->Default Softkeys** Menu.


AastraLink PRO
AASTRA
John Smith (x200)
About | Logout
My Phone
Users
Configuration
Maintenance
System
Network
DialPlan
VoIP
Auto-Attendant
Regional Settings
Set Date/Time
Music on Hold
Relay/Push Button
Voicemail

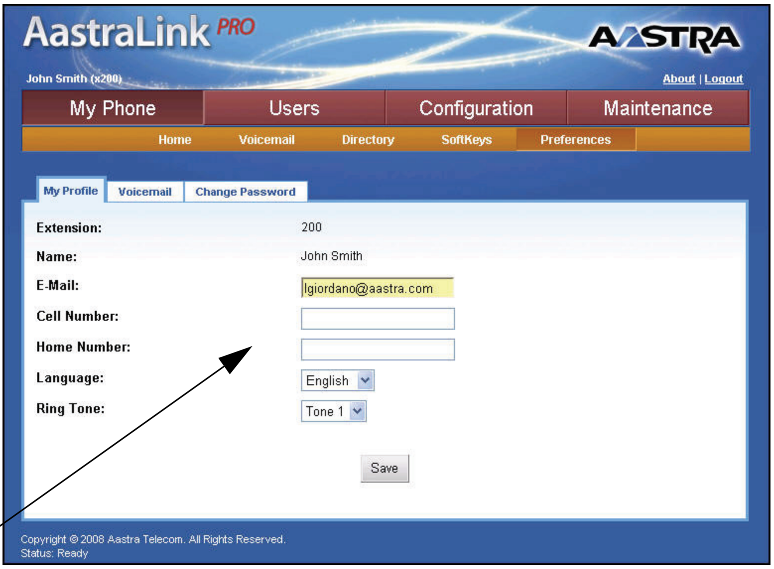
Third level menus are tabs that are different depending on the second level menu selected.

Configuration/System Menu Tabs


AastraLink PRO
AASTRA
John Smith (x200)
About | Logout
My Phone
Users
Configuration
Maintenance
User List
Groups
Default SoftKeys
9143i
9480i
9480iCT
53i
55i
57i
57iCT

Users/Default Softkeys Menu Tabs

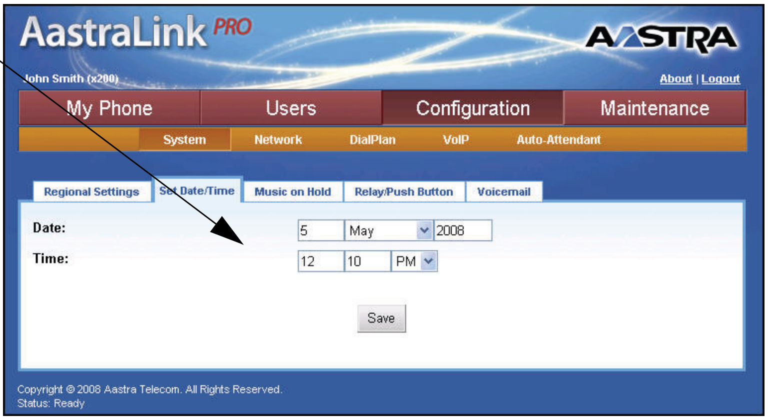
The parameters you can configure are on the final level within the menu structure.


AastraLink PRO
AASTRA
John Smith (x200)
About | Logout
My Phone
Users
Configuration
Maintenance
Home
Voicemail
Directory
SoftKeys
Preferences
My Profile
Voicemail
Change Password
Save
Copyright © 2008 Aastra Telecom. All Rights Reserved.
Status: Ready

Extension: 200
Name: John Smith
E-Mail: lgiordano@aastra.com
Cell Number:
Home Number:
Language: English
Ring Tone: Tone 1

My Phone/Preferences/My Profile Parameters

Configurable Parameters


AastraLink PRO
AASTRA
John Smith (x200)
About | Logout
My Phone
Users
Configuration
Maintenance
System
Network
DialPlan
VoIP
Auto-Attendant
Regional Settings
Set Date/Time
Music on Hold
Relay/Push Button
Voicemail
Save
Copyright © 2008 Aastra Telecom. All Rights Reserved.
Status: Ready

Date: 5 May 2008
Time: 12 10 PM

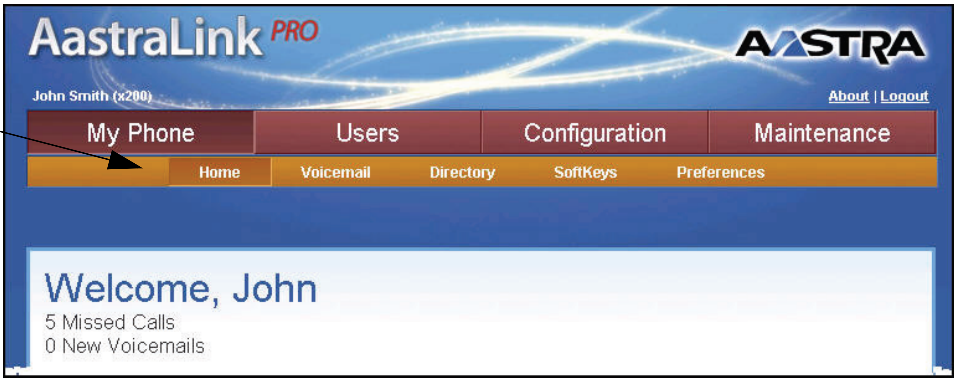
Configuration/System/Date and Time Parameters

The following paragraphs describe the information in the AastraLink Pro Web UI, administrator menu structure.

My Phone

The *My Phone* menu displays the following submenus:

- **Home**
- **Voicemail**
- **Directory**
- **Softkeys** (Administrator's Phone)
- **Preferences**


AastraLink PRO
AASTRA
John Smith (x200)
About | Logout
My Phone
Users
Configuration
Maintenance
Home
Voicemail
Directory
SoftKeys
Preferences

Welcome, John
5 Missed Calls
0 New Voicemails

My Phone submenus

Figure 2-5. My Phone Menu (Administrator)

Each of these submenus are described below.

Home Menu

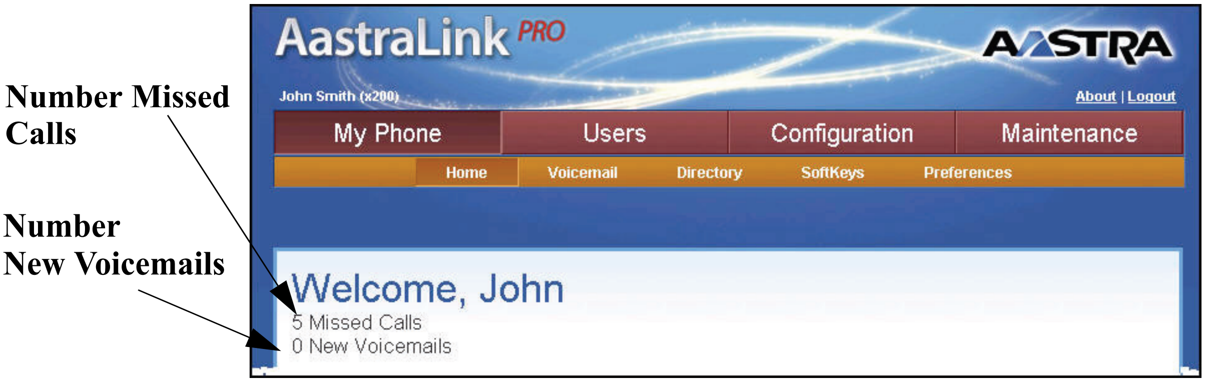
The administrator Home Menu allows you to perform the following:

- View number of missed calls
- View number of current voicemails
- Enter a number to dial from your phone if required

- Configure current call settings (do not disturb, call forward, find-me follow-me)
- View current Call List (calls placed and received by your phone); delete specific entry or all entries from the Call List; select an entry to call back from the Call List.

Missed Calls and New Voicemails

You can view the number of currently missed calls and new voicemails from the *My Phone->Home* menu.


AastraLink PRO
AASTRA
John Smith (x200)
About | Logout
My Phone
Users
Configuration
Maintenance
Home
Voicemail
Directory
SoftKeys
Preferences

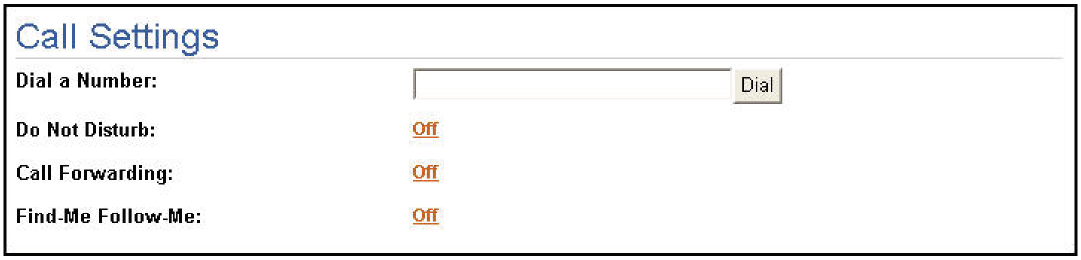
Number Missed Calls

Number New Voicemails

Welcome, John
5 Missed Calls
0 New Voicemails

Call Settings

The “Call Settings” on the *My Phone->Home* menu allow you to dial a phone number from your phone using the Web UI, and set specific features on your phone, such as, do-no-disturb (DND), call forward, and find-me follow-me.

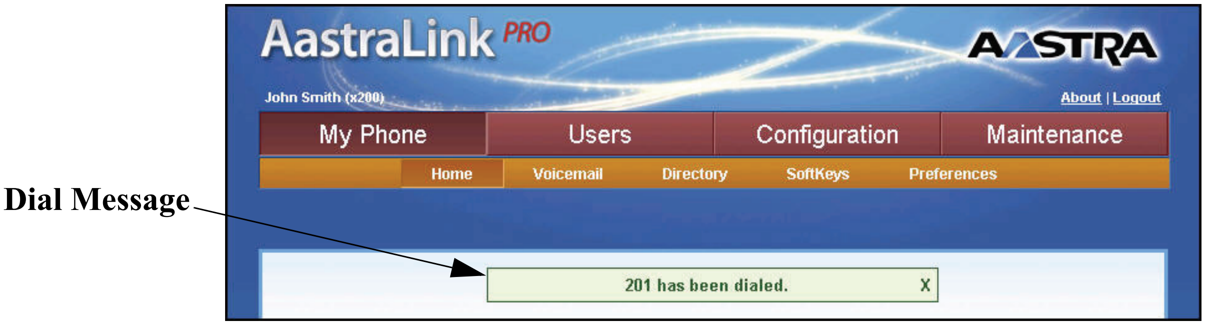


Call Settings

Dial a Number:	
Do Not Disturb:	Off
Call Forwarding:	Off
Find-Me Follow-Me:	Off

Dialing from the Web UI

To dial a number from your phone using the Web UI, enter a phone number in the "**Dial a Number**" text box and click **<Dial>**. A message displays at the top of the screen indicating the number has been dialed.


AastraLink PRO
AASTRA
John Smith (x200)
About | Logout
My Phone
Users
Configuration
Maintenance
Home
Voicemail
Directory
SoftKeys
Preferences
X

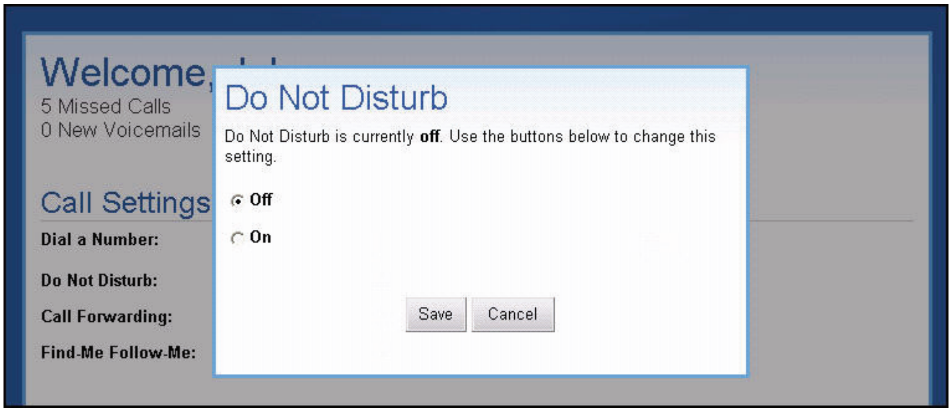
Dial Message

201 has been dialed.

Enabling/Disabling Do Not Disturb (DND)

By default, DND is disabled on the administrator phone. Use the following procedure to enable or disable DND on your phone.

AastraLink Web UI

Step	Action
1	Select **My Phone->Home.**
2	In the **"Do Not Disturb**" field, click **"Off"**. The following screen displays.  Welcome, 5 Missed Calls 0 New Voicemails Call Settings Dial a Number: Do Not Disturb: Call Forwarding: Find-Me Follow-Me: Save Cancel Do Not Disturb Do Not Disturb is currently **off**. Use the buttons below to change this setting. ● Off ○ On

AastraLink Web UI

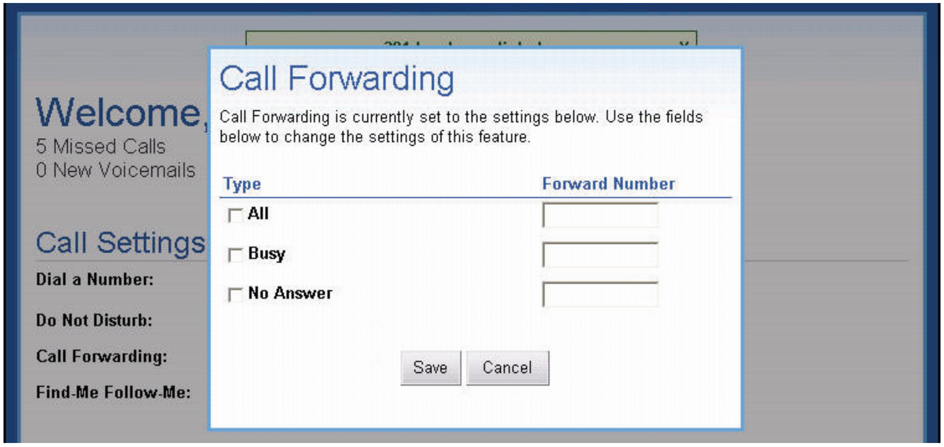
Step	**Action**
3	Enable DND by clicking the “**On**” field. Disable DND by clicking the “**Off**” field.
4	Click **<Save>** to save the setting.

Configuring Call Forwarding

By default, Call Forwarding is disabled on the administrator phone. Call Forwarding allows you to forward calls from the administrator phone to other specified numbers if the administrator phone is in a specific state(s) (busy or no answer) and cannot answer the incoming call. This feature also allows you to set the administrator phone to forward all incoming calls to another number. When configuring Call Forwarding, you can select any or all states (all, busy, no answer).

Use the following procedure to configure Call Forwarding on your phone.

AastraLink Web UI

Step	Action
1	Select **My Phone->Home.**
2	In the **"Call Forwarding**" field, click **"Off"**. The following screen displays.  Welcome, 5 Missed Calls 0 New Voicemails Call Settings Dial a Number: Do Not Disturb: Call Forwarding: Find-Me Follow-Me: Call Forwarding Call Forwarding is currently set to the settings below. Use the fields below to change the settings of this feature. Type / Forward Number ☐ All ☐ Busy ☐ No Answer Save Cancel
3	In the "**Type**" field, place a check mark in any or all of the phone status boxes: • **All** • **Busy** • **No Answer**

AastraLink Web UI

Step	Action
4	In the “**Forward Number**” field, enter a phone number for the phone state you chose in step 3. If the administrator phone is in the state you specified in step 3, all incoming calls are call forwarded to the number you specified for that state.
5	Click **<Save>** to save the setting.

Configuring Find-Me Follow-Me

The Find-Me Follow-Me feature on the administrator phone allows you to specify other phone numbers that can be used to try to reach you (for example, your work phone number or your cell phone number), if a caller cannot reach you on the administrator phone

Find-Me Follow-Me is disabled by default on the administrator phone. You can enable Find-Me Follow-Me using two different modes:

- **Parallel** - When an incoming call comes into the administrator phone and there is no answer, the administrator phone rings both the first preset number and the second preset number at the same time.
- **Sequential** - When an incoming call comes into the administrator phone and there is no answer, the administrator phone rings the first preset number; if no answer at this number, it then rings the second preset number.

In the “**First Preset**” and “**Second Preset**” fields, you can specify whether the find-me follow-me number is an extension number or another type of number (PSTN number).

Note: By default, the “First Preset” field is set to “**Extension**”, and the “Second Preset” field is set to “**Other**”.

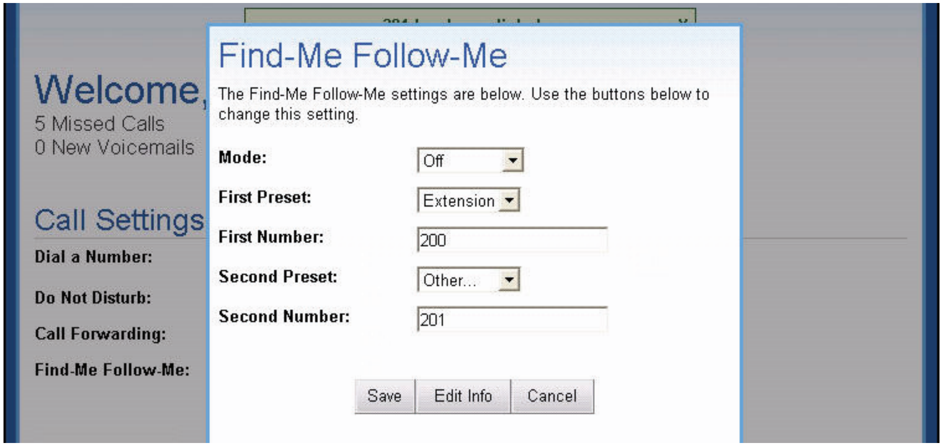
In the “**First Number**” and “**Second Number**” fields, you can specify the extension or another type of number (home, work or cell phone number) to use for the find-me follow-me configuration.

Note: By default, the “First Number” field is set to the administrator’s phone extension, and the “Second Number” field is set to the next sequential User phone extension in the network.

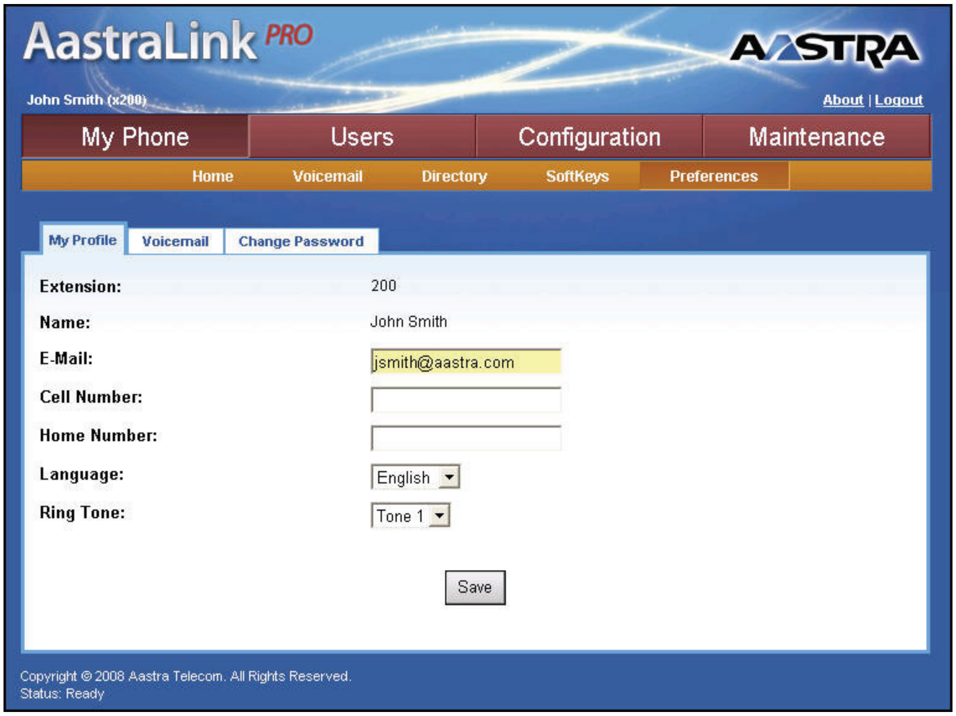
The **<Edit Info>** button allows you to edit your profile information if required. This is the same screen that displays for *My Phone->Preferences->My Profile*.

Use the following procedure to configure Find-Me Follow-Me on your phone.

AastraLink Web UI

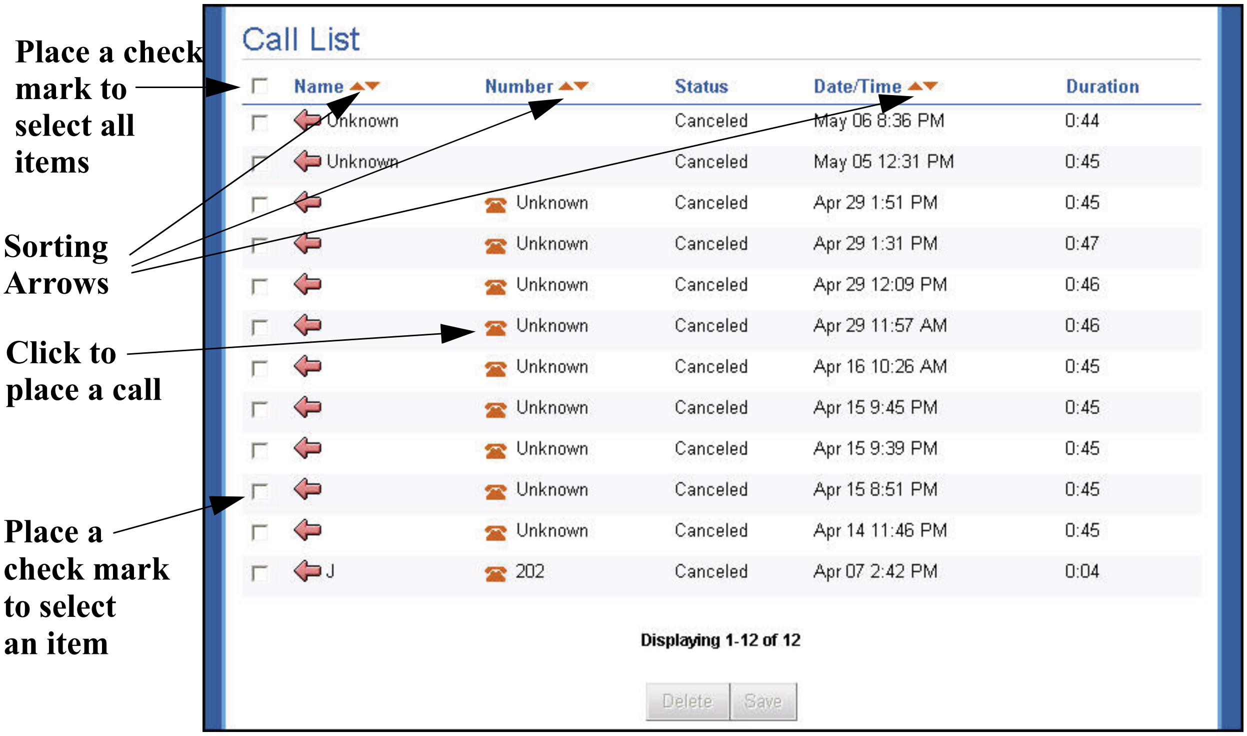
Step	Action
1	Select **My Phone->Home.**
2	In the **“Find-Me Follow-Me**” field, click **“Off”**. The following screen displays.  Welcome, 5 Missed Calls 0 New Voicemails Call Settings Dial a Number: Do Not Disturb: Call Forwarding: Find-Me Follow-Me: Save Edit Info Cancel Find-Me Follow-Me The Find-Me Follow-Me settings are below. Use the buttons below to change this setting. **Mode:** Off **First Preset:** Extension **First Number:** 200 **Second Preset:** Other... **Second Number:** 201
3	In the “**Mode**” field, select a mode to use for the Find-Me Follow-Me configuration. Valid values are: • **Off -** (default) Disables Find-Me Follow-Me • **Parallel** - When an incoming call comes into the administrator phone and there is no answer, the administrator phone rings both the first preset number and the second preset number at the same time. • **Sequential** - When an incoming call comes into the administrator phone and there is no answer, the administrator phone rings the first preset number; if no answer at this number, it then rings the second preset number
4	In the “**First Preset**” field, select the type of number you want to use for Find-Me Follow-Me. Valid values are: • **Extension** • **Other** (any other valid number such as, home phone, cell phone, or work phone)
5	In the “**First Number**” field, enter the first extension or phone number you want to use for Find-Me Follow-Me.

AastraLink Web UI

Step	Action
6	In the "**Second Preset**" field, select the type of number you want to use for Find-Me Follow-Me. Valid values are: • **Extension** • **Other** (any other valid number such as, home phone, cell phone, or work phone)
7	In the "**Second Number**" field, enter the second extension or phone number you want to use for Find-Me Follow-Me.
8	Click **<Save>** to save the setting.
9	(Optional) If you need to edit your administrator profile, click **<Edit Info>**. The following screen displays.  AastraLink PRO AASTRA John Smith (x200) About | Logout My Phone Users Configuration Maintenance Home Voicemail Directory SoftKeys Preferences My Profile Voicemail Change Password Save Copyright © 2008 Aastra Telecom. All Rights Reserved. Status: Ready **Extension:** 200 **Name:** John Smith **E-Mail:** jsmith@aastra.com **Cell Number:** **Home Number:** **Language:** English **Ring Tone:** Tone 1 Edit your profile screen as applicable.
10	Click **<Save>** to save the settings.

Call List

The call list is a list of calls placed and received by your phone. You can sort the call list in ascending or descending order by clicking on the arrows at the top of each column.


Place a check mark to select all items
Sorting Arrows
Click to place a call
Place a check mark to select an item

Call List

☐	Name ▲▼	Number ▲▼	Status	Date/Time ▲▼	Duration
☐	⇦ Unknown		Canceled	May 06 8:36 PM	0:44
☐	⇦ Unknown		Canceled	May 05 12:31 PM	0:45
☐	⇦	☎ Unknown	Canceled	Apr 29 1:51 PM	0:45
☐	⇦	☎ Unknown	Canceled	Apr 29 1:31 PM	0:47
☐	⇦	☎ Unknown	Canceled	Apr 29 12:09 PM	0:46
☐	⇦	☎ Unknown	Canceled	Apr 29 11:57 AM	0:46
☐	⇦	☎ Unknown	Canceled	Apr 16 10:26 AM	0:45
☐	⇦	☎ Unknown	Canceled	Apr 15 9:45 PM	0:45
☐	⇦	☎ Unknown	Canceled	Apr 15 9:39 PM	0:45
☐	⇦	☎ Unknown	Canceled	Apr 15 8:51 PM	0:45
☐	⇦	☎ Unknown	Canceled	Apr 14 11:46 PM	0:45
☐	⇦ J	☎ 202	Canceled	Apr 07 2:42 PM	0:04

Displaying 1-12 of 12

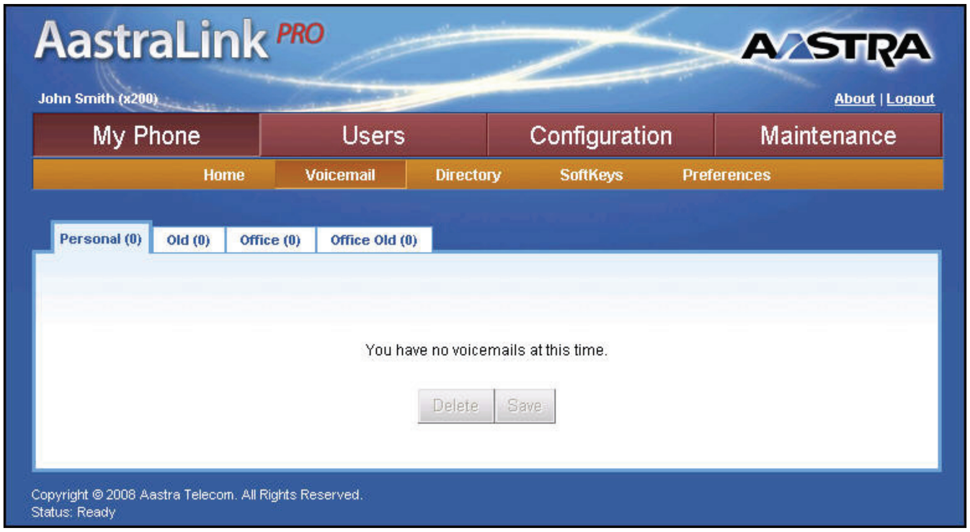
In the **Number** column, you can click on the ☎ symbol for a specific number and the administrator phone dials that number.

You can also select a specific call item or all call items to delete. Select a specific call item by placing a check mark in the box for that item and click **<Delete>**. Delete all call items in the list by placing a check mark in the box at the top of the **Name** column and click **<Delete>**.

Voicemail Menu

The Voicemail Menu allows you to perform the following:

- View and use visual voicemail (listen to, save, forward, delete your voicemail messages)


AastraLink PRO
AASTRA
John Smith (x200)
About | Logout
My Phone
Users
Configuration
Maintenance
Home
Voicemail
Directory
SoftKeys
Preferences
Personal (0)
Old (0)
Office (0)
Office Old (0)
Delete
Save

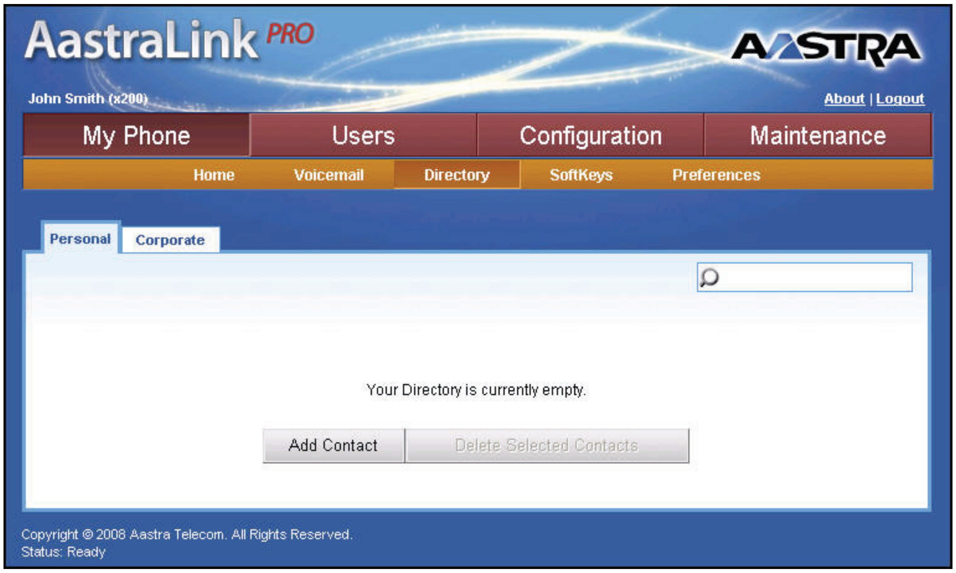
You have no voicemails at this time.

Copyright © 2008 Aastra Telecom. All Rights Reserved.
Status: Ready

Directory Menu

The Directory Menu allows you to perform the following:

- View your personal and corporate directory; add, delete, and search contacts as required.


AastraLink PRO
AASTRA
John Smith (x200)
About | Logout
My Phone
Users
Configuration
Maintenance
Home
Voicemail
Directory
SoftKeys
Preferences
Personal
Corporate
Add Contact
Delete Selected Contacts

Your Directory is currently empty.

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Status: Ready

Softkey Menu (Administrator Phone)

The Softkey Menu allows you to configure the softkeys on the administrator phone. Softkeys function exactly like the hard keys on your phone, except they are programmable. When you press a softkey on your IP phone, an action takes place. For example, when you press the DND softkey, you enable Do Not Disturb on your phone.

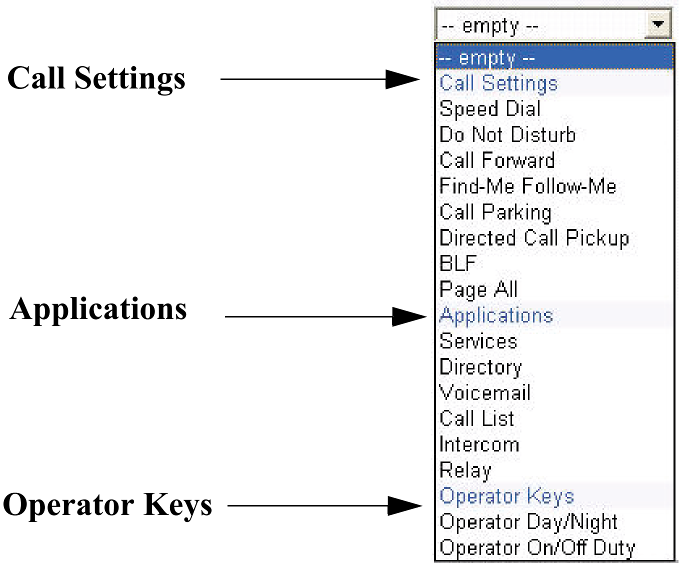
The Softkey Menu for the administrator allows you to perform the following:

- Configure/edit default softkey settings for the administrator IP phone. You can also reset these softkeys to their default values if required. The tabs that display in this menu are dependant on the phone model of your administrator phone. For example, for a 55i, 57i, and 57i CT, two tabs display as “Softkeys” and “Top Softkeys” since you can configure the top and bottom softkeys on these models.
- (For phone models that allow you to configure labels for the softkeys) Print insert labels to place on the IP phone front panel. From the softkey menu, after you configure a softkey with a label, you can print out the label on a pre-formatted template. Once you print this out, you can place the insert in the appropriate location on the front panel of the phone. This insert identifies the softkey labels you just created.

When you select a softkey to configure, options are organized by type into the following categories:

- **Call Settings Softkeys** - used to specify how inbound/outbound calls are handled. For example, Do Not Disturb, or Call Forwarding.
- **Applications Softkeys** - used to access applications (Voicemail) or phone menus (the Service menu)
- **Operator Softkeys** - (Operator only) used to define Operator status and schedules.

Note: The operator softkeys only display on a per-line basis for the line provisioned as "Operator".


-- empty --
-- empty --
Call Settings
Speed Dial
Do Not Disturb
Call Forward
Find-Me Follow-Me
Call Parking
Directed Call Pickup
BLF
Page All
Applications
Services
Directory
Voicemail
Call List
Intercom
Relay
Operator Keys
Operator Day/Night
Operator On/Off Duty

Call Settings

Applications

Operator Keys

Reference

For more information about Call Setting and Application type softkeys, see Chapter 3, the section, "Default Softkeys (Users Menu)" on page 3-25.

Operator Softkeys (Administrator Phone)

The following table describes the Operator softkeys you can configure for the administrator or user phone configured as the Operator.

Operator softkeys only apply to those extensions that are designated as Operator. This includes the administrator, and any other extensions that you assign Operator privileges.

Softkey Type	Function
Operator Day/ Night	Allows an operator to override the current schedule specified (weekends and holidays) and switch to either the Day schedule or the Night Schedule.
Operator On/Off Duty	Allows an operator to specify whether or not someone is available to answer the phone. • When Enabled, incoming calls are handled first by an operator, then by an Auto-attendant. • When Disabled, incoming calls are handled first by the Auto-attendant.

Default Softkeys (Administrator Phone)

By default, the following six softkeys are pre-configured on the administrator phone:

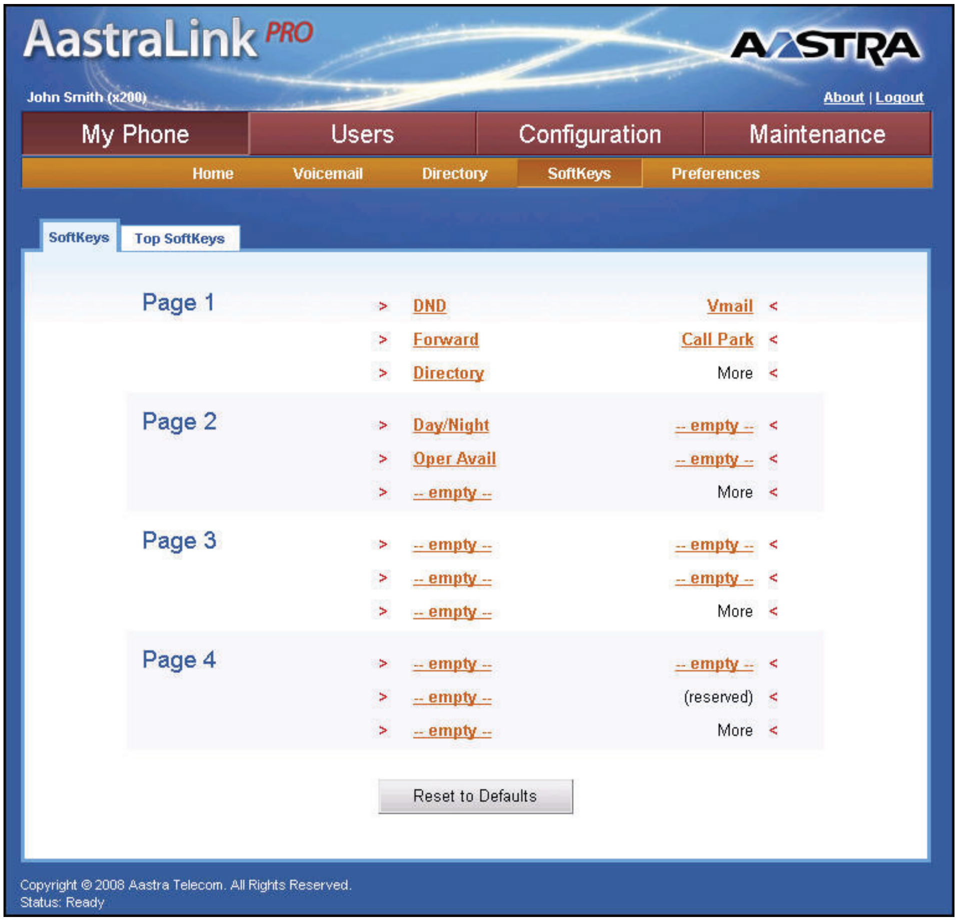
- **DND**
- **Call Forward**
- **Operator Day/Night**
- **Operator On/Off Duty**
- **Voicemail**
- **Call Park**

All other softkeys are configured as “**empty**” (no configuration).

Use the following procedure to configure a softkey on the administrator phone.

AastraLink Web UI

Step	Action
1	Select **My Phone->Softkeys.**


AastraLink PRO
AASTRA
John Smith (x200)
About | Logout
My Phone
Users
Configuration
Maintenance
Home
Voicemail
Directory
SoftKeys
Preferences
SoftKeys
Top SoftKeys
Reset to Defaults

Page 1	DND	Vmail
	Forward	Call Park
	Directory	More
Page 2	Day/Night	-- empty --
	Oper Avail	-- empty --
	-- empty --	More
Page 3	-- empty --	-- empty --
	-- empty --	-- empty --
	-- empty --	More
Page 4	-- empty --	-- empty --
	-- empty --	(reserved)
	-- empty --	More

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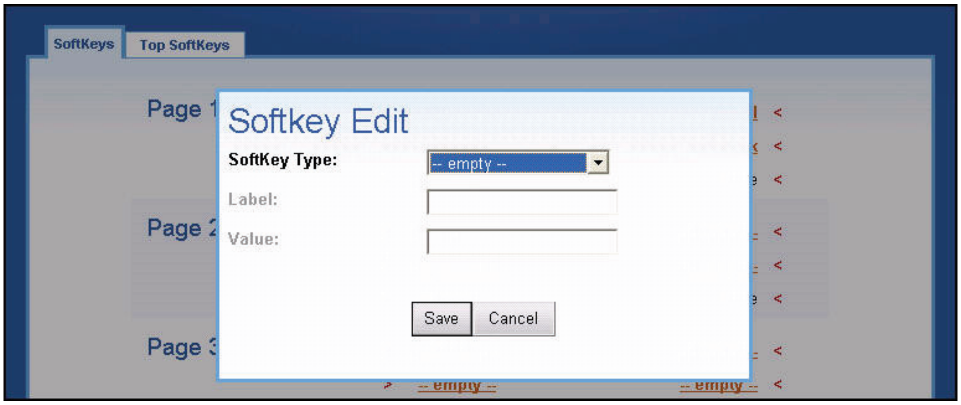
Status: Ready

AastraLink Web UI

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>2</td><td>Click on a pre-configured softkey to change the function of the key;
or
Click on an “empty” softkey to configure a function for that key.

The following screen displays.


Softkey Edit
SoftKey Type: -- empty --
Label:
Value:
</td></tr>
<tr><td>3</td><td>In the “Softkey Type” field, select a softkey type from the list. Valid values are:

<table>
<tr><th><u>Call Settings</u></th><th><u>Applications</u></th><th><u>Operator Keys</u></th></tr>
<tr><td>Speeddial</td><td>Services</td><td>Operation Day/Night</td></tr>
<tr><td>Do Not Disturb</td><td>Directory</td><td>Operation On/Off Duty</td></tr>
<tr><td>Call Forward</td><td>Voicemail</td><td></td></tr>
<tr><td>Find-Me Follow-Me</td><td>Call List</td><td></td></tr>
<tr><td>Call Parking</td><td>Intercom</td><td></td></tr>
<tr><td>Directed Call Pickup</td><td>Relay</td><td></td></tr>
<tr><td>BLF</td><td></td><td></td></tr>
<tr><td>Page All</td><td></td><td></td></tr>
</table>

Note: For more information about the Operator softkeys, see “Operator Softkeys (Administrator Phone)” on page 24. For a description of the softkey functions, see Chapter 3, the section, “Default Softkeys (Users Menu)” on page 3-25.</td></tr>
<tr><td>4</td><td>If applicable, in the “Label” field, enter a label for the softkey. On the 9480i, 9480i CT, 55i, 57i, and 57i CT phones, this label appears on the LCD next to the softkey.

Note: The “Label” field is applicable to specific softkey functions only. For more information about entering labels, see your phone-specific User Guide.</td></tr>
</table>

AastraLink Web UI

Step	Action
5	If applicable, in the “**Value**” field, enter a value for the softkey. **Note:** The “Value” field is applicable to specific softkey functions only. For more information about entering applicable values, see your phone-specific User Guide.
6	(Optional) To reset all softkeys back to their defaults, click **<Reset to Defaults>**.
7	Click **<Save>** to save the setting.

Softkeys for Expansion Modules (Administrator Phone)

You add, edit, and delete softkeys for an expansion module attached to your IP phone the same way you do for the IP phone itself. See “Softkey Menu (Administrator Phone)” on page 2-22.

In addition, you can use the Web UI to download the corporate directory and quickly configure speeddial softkeys on the module.

AastraLink Web UI

Step	Action
1	Select **My Phone->Softkeys->Expansion Module 1.** **Note:** The AastraLink Pro 160 supports only one expansion module per phone.
2	Click **Corporate Directory.** The AastraLink begins to download and configure the expansion module with the corporate directory contacts. When the process complete, a message appears confirming that the download is complete. If you view the expansion module UI, you will see speed dials configured for each person listed in the corporate directory.

Preferences Menu

The Preferences Menu allows you to perform the following:

- Specify your email address, home phone number, cell phone number
- Specify the language to display on your phone.
- Specify the ring tone that you want your phone to use.

There are three tabs on the Preferences Menu:

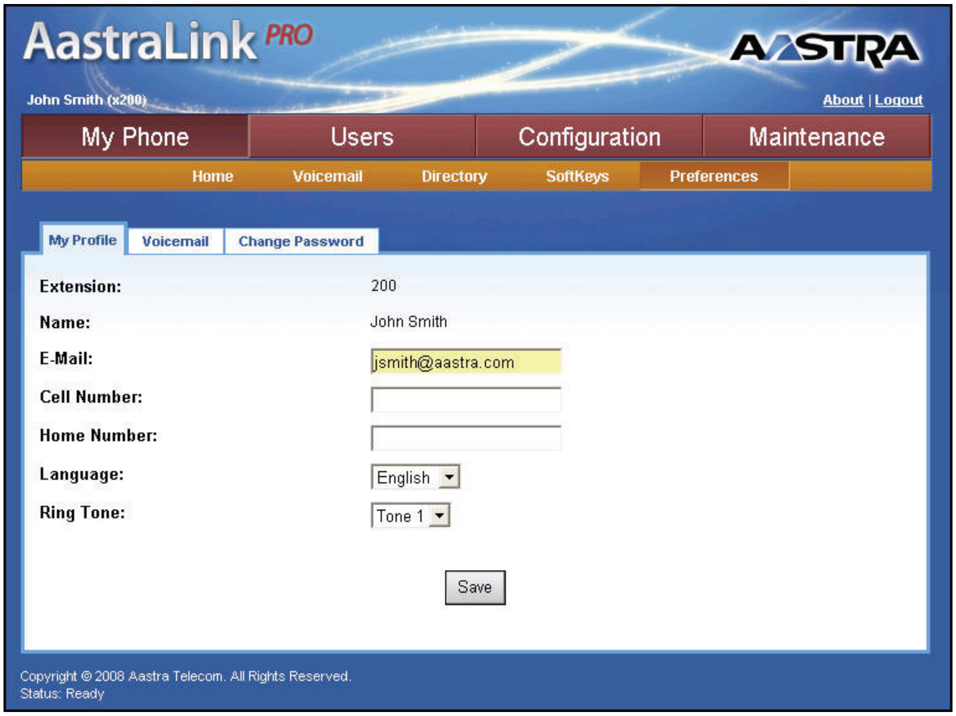
- **My Profile**
- **Voicemail**
- **Change Password**

My Profile

The My Profile screen allows you to specify your administrator profile (email address, cell number, home number, language to use on the phone, and ring tone). The Name and Extension are specified as the administrator's name and the administrator's extension.

Use the following procedure to specify your administrator profile.

AastraLink Web UI

Step	Action
1	Select **My Phone->Preferences->My Profile.**  AastraLink PRO AASTRA John Smith (x200) About | Logout My Phone Users Configuration Maintenance Home Voicemail Directory SoftKeys Preferences My Profile Voicemail Change Password Save Copyright © 2008 Aastra Telecom. All Rights Reserved. Status: Ready Extension: 200 Name: John Smith E-Mail: jsmith@aastra.com Cell Number: Home Number: Language: English Ring Tone: Tone 1
2	In the "**Email**" field, enter the email address for the administrator.
3	In the "**Cell Number**" field, enter the cell phone number for the administrator.
4	In the "**Home Number**" field, enter the home phone number for the administrator.
5	In the "**Language**" field, enter the language to use for the administrator's Web UI. Valid values are: • **English** (default) • **Spanish** • **French** **Note:** Clicking **<Save>** changes the language in the current Web UI session immediately.

AastraLink Web UI

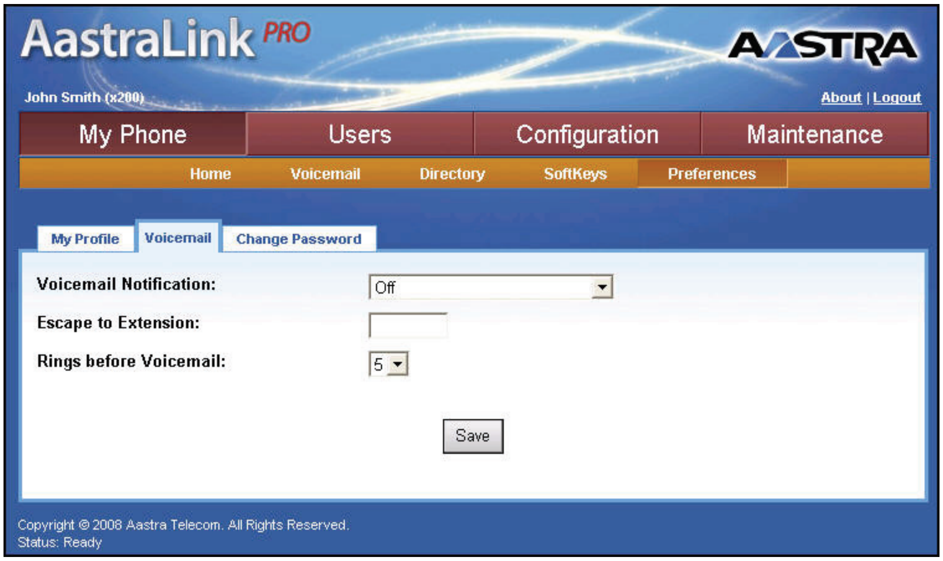
Step	Action
6	In the “Ring Tone” field, select a ring tone to use on the administrator phone. Valid values are: • **Tone 1** (default) • **Tone 2** • **Tone 3** • **Tone 4** • **Tone 5** **Note:** For more information about these tones, see Chapter 3, the section, “Ring Tone Patterns” on page 3-18.
7	Click **<Save>** to save the setting.

Voicemail

The Voicemail screen allows you to set your voicemail preferences for your administrator phone. You can set whether or not you want voicemail notification by email, and if you want the phone to automatically ring to another extension. You can also set how many times you want the administrator phone to ring before it sends the call to voicemail.

Use the following procedure to specify your administrator voicemail preferences.

AastraLink Web UI

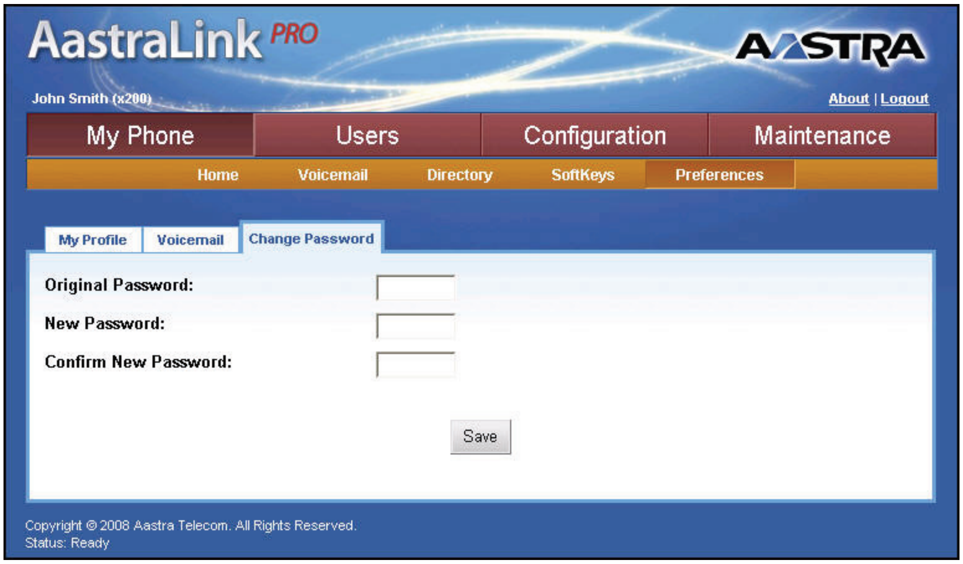
Step	Action
1	Select **My Phone->Preferences->Voicemail.**  AastraLink PRO AASTRA John Smith (x200) About | Logout My Phone Users Configuration Maintenance Home Voicemail Directory SoftKeys Preferences My Profile Voicemail Change Password Save Voicemail Notification: Off Escape to Extension: Rings before Voicemail: 5 Copyright © 2008 Aastra Telecom. All Rights Reserved. Status: Ready
2	In the "**Voicemail Notification**" field, select whether or not an email is sent to the administrator's email address to notify of a voicemail that was left by the incoming caller. Valid values are: • **Off** (default) • **Email** • **Email with Audio-Attachment**
3	In the "**Escape to Extension**" field, enter an extension number (other than the administrator's extension number) that you want the administrator's phone to automatically ring to.
4	In the "**Rings Before Voicemail**" field, select the number of rings that you want your administrator phone to perform before sending the call to voicemail. Valid values are **1** through **6**. Default is **5**.
5	Click **<Save>** to save the setting.

Change Password

The Change Password screen allows you to change your administrator password if required.

Use the following procedure to change your administrator password.

AastraLink Web UI

Step	Action
1	Select **My Phone->Preferences->Change Password.**  AastraLink PRO AASTRA John Smith (x200) About | Logout My Phone Users Configuration Maintenance Home Voicemail Directory SoftKeys Preferences My Profile Voicemail Change Password Original Password: New Password: Confirm New Password: Save Copyright © 2008 Aastra Telecom. All Rights Reserved. Status: Ready
2	In the "**Original Password**" field, enter the password you used to login into the current administrator Web UI session.
3	In the "**New Password**" field, enter a new password that you want to use to log into the administrator Web UI.
4	In the "**Confirm New Password**" field, re-enter the new password.
5	Click **<Save>** to save the setting.

Users

The *Users* menu displays the IP phones currently registered in your AastraLink Pro 160 network (with extensions). The list of phones includes the Operator (or administrator) phone as well as all user phones.

From the *Users* menu, you can view and/or configure the following:

User List Menu

- Upload User List
- Add a phone(s)
- Pre-register the phones (individually or as bulk upload) so that they enter service automatically when connected to the network
- Reboot a phone or all phones
- Configure/edit operator and user profiles

Groups Menu

- Add/delete/edit a User Group(s)

Default Softkeys Menu (User Phone)

- Configure/edit default softkey settings for all registered user phones in your AastraLink Pro 160 network. You can also reset these softkeys to their default values if required. The tabs that display in this menu are applicable to a 9143i, 9480i, 9480i CT, 51i, 55i, 57i, 57i CT, which are the only phones you can configure with the AastraLink Pro 160.

Reference

For more information about the *Users* Menu, see Chapter 3, “Configuring Aastra IP Phone Profiles.”

Configuration

The *Configuration* menu displays the current system and network management settings. These settings apply to the AastraLink Pro 160 device.

From the *Configuration* menu, you can view and/or configure the following:

System Menu

- Specify regional settings
- Set date and time
- Configure Music on Hold
- Configure the Relay Push Button
- Specify the maximum duration of a voicemail and the maximum number of voicemail messages to store on the AastraLink Pro 160.

Network Menu

- Specify local network parameters
- Specify local services
- Specify external services

Dial Plan Menu

- Specify dial plan settings (parked call timeout, administrator password, and overhead paging PIN) for phones in your network
- Specify emergency numbers for phones in your network (not applicable to remote phones)
- Specify barred numbers (blocked numbers) for phones in your network
- View current private lines in your network
- Specify abbreviations to use on phones in your network
- Specify external services for phones in your network

VoIP Menu

- Configure SIP trunks
- Add/delete SIP direct inward dialing (DID) numbers
- Configure AastraLink trunks

Auto-Attendant Menu

- Configure Open and Closed Greetings for the interactive voice response system (IVR) (Auto-Attendant)
- Configure a Custom Main Menu for the Auto-Attendant
- Configure a Custom Key Message for the Auto-Attendant
- Configure Language Greetings for the Auto-Attendant to use (English (default), French, Spanish)
- Schedule open and closed hours for each day of the week
- Specify open and closed hours for specific holidays

Reference

For more information about the *Configuration* Menu, see Chapter 4, "Configuring AastraLink Pro 160 System and Network Parameters."

Maintenance

The *Maintenance* menu displays system information and provides options for maintaining the AastraLink Pro 160 device.

From the *Maintenance* menu, you can view and/or configure the following:

Current Status Menu

- View serial number of the AastraLink Pro 160
- View percentage of voicemail usage
- View status of lines 1 through 6
- View LAN/WAN status
- Reboot the entire AastraLink Pro 160 system (including all connected phones)
- Shutdown the entire AastraLink Pro 160 system (including al connected phones)

Call Records Menu

- View and sort the Call Record log
- Download the current Call Record log
- Download the entire archive of Call Record logs stored on the AastraLink Pro 160

Backup & Restore Menu

- Backup the current AastraLink Pro 160 configuration into an "*.abf*" file stored on your PC to use later if required.
- Restore a previously backed up AastraLink Pro 160 configuration from an "*.abf*" file stored on your PC.
- Reboot the entire AastraLink Pro 160 system (including all connected phones)

Update Menu

- Specify whether or not to you want the AastraLink Pro 160 to automatically check and install updates as required (options are notify, download only, download and install).
- Specify day and time to check for updates

Support Menu

- Specify whether or not to send debug information to Aastra Support for troubleshooting purposes.

Reference

For more information about the *Maintenance* Menu, see Chapter 5, "Maintaining the AastraLink Pro 160."

Chapter 3
Configuring Aastra IP Phone Profiles

About this Chapter

Introduction

This chapter describes how you use the AastraLink Web UI to configure profiles that apply to all of the Aastra IP phones in your network. It provides instructions for managing users, creating user groups, and specifying global default softkey settings.

Note: You must be logged in as administrator to perform the tasks described in this chapter.

Topics

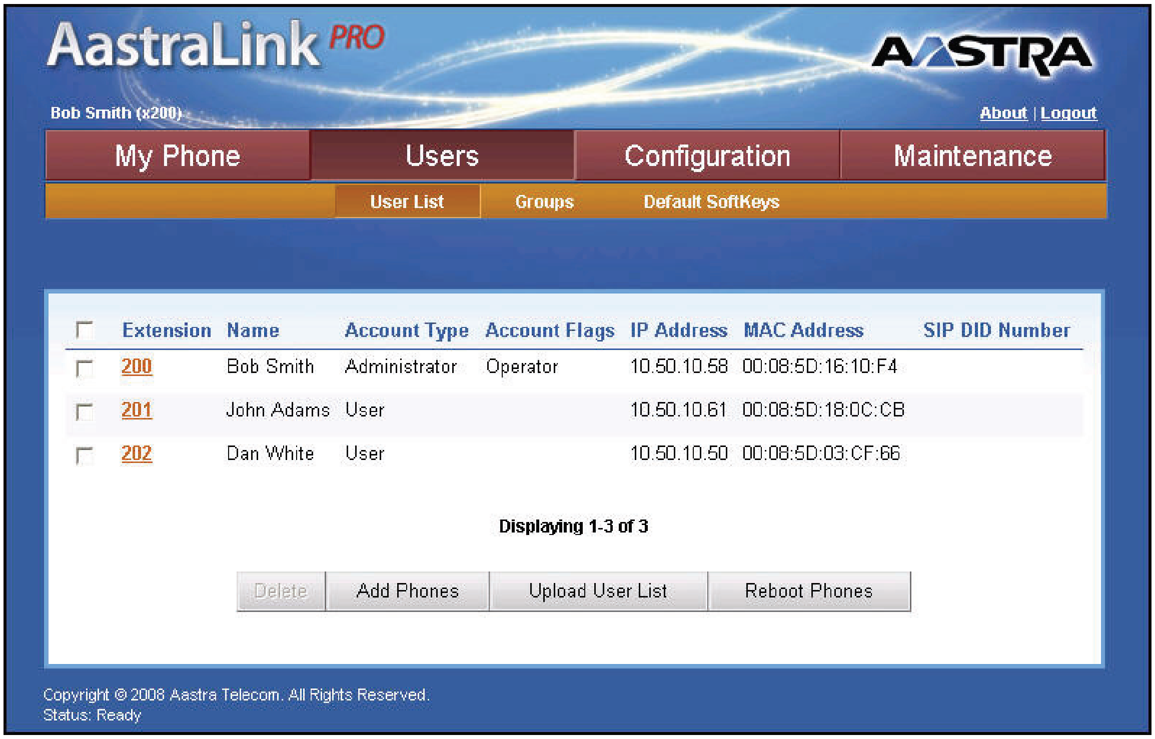
This chapter covers the following topics:

Topic	Page
Accessing the Users Menu	page 3-3
Managing IP Phone Users	page 3-4
Adding User Profiles and Phones	page 3-5
Editing User Profiles	page 3-10
Deleting User Profiles	page 3-13
Configuring User Groups	page 3-15
User Groups	page 3-15
Adding a User Group	page 3-21
Editing a User Group	page 3-23

Topic	Page
Deleting a User Group	page 3-24
Default Softkeys (Users Menu)	page 3-25
Using the Default Softkeys Menu (User Phone)	page 3-26
Softkey Types (User Phone)	page 3-27
Adding a Default Softkey (User Phone)	page 3-33
Editing a Default Softkey (User Phone)	page 3-33
Deleting a Default Softkey (User Phone)	page 3-34
Softkeys for Expansion Modules (User Phone)	page 3-35
Restoring Default Softkeys Back to Factory Settings	page 3-36

Accessing the Users Menu

You configure Aastra IP phone profiles from the **Users** menu, shown below.


AastraLink PRO
AASTRA
Bob Smith (x200)
About | Logout
My Phone
Users
Configuration
Maintenance
User List
Groups
Default SoftKeys
Delete
Add Phones
Upload User List
Reboot Phones

☐	Extension	Name	Account Type	Account Flags	IP Address	MAC Address	SIP DID Number
☐	200	Bob Smith	Administrator	Operator	10.50.10.58	00:08:5D:16:10:F4	
☐	201	John Adams	User		10.50.10.61	00:08:5D:18:0C:CB	
☐	202	Dan White	User		10.50.10.50	00:08:5D:03:CF:66	

Displaying 1-3 of 3

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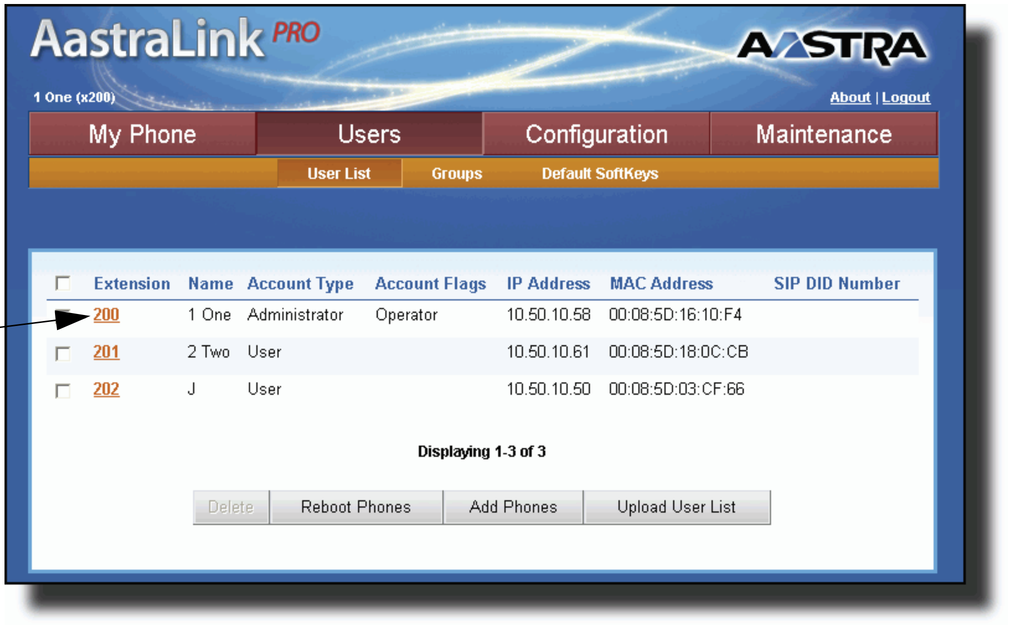
Status: Ready

Figure 3-1. Users Menu

Managing IP Phone Users

You manage Aastra IP phone users from the **Users->User List** Menu.


AastraLink PRO
AASTRA
1 One (x200)
About | Logout
My Phone
Users
Configuration
Maintenance
User List
Groups
Default SoftKeys
Delete
Reboot Phones
Add Phones
Upload User List

☐	Extension	Name	Account Type	Account Flags	IP Address	MAC Address	SIP DID Number
	200	1 One	Administrator	Operator	10.50.10.58	00:08:5D:16:10:F4	
☐	201	2 Two	User		10.50.10.61	00:08:5D:18:0C:CB	
☐	202	J	User		10.50.10.50	00:08:5D:03:CF:66	

Displaying 1-3 of 3

Click on the extension number link to edit a User's account

From this menu, you can edit user profiles, delete users from your IP phone network, add new users and phones, upload a pre-defined User List (*.csv* file which contains user and phone information), and/or remotely reboot individual or multiple IP phones. On the User screen, you can also view information about the user phones (MAC address, etc.).

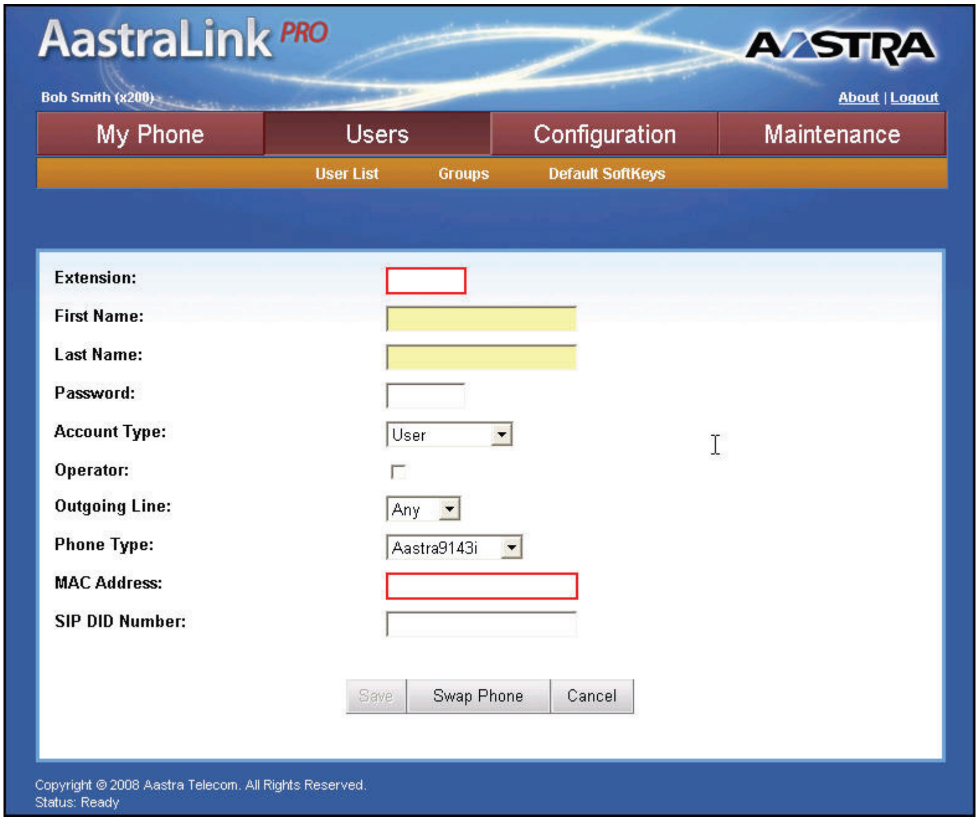
The AastraLink Pro 160 is designed to allow zero-management for normal maintenance activities such as adding a new line to the system. Most customers will prefer to allow users to register and manage their own phone; however for customers who prefer a more traditional centralized management model, the option is available to add, remove and change IP phone and user accounts from the administrator Users menu.

Adding User Profiles and Phones

You can add new Users and phones to your network by clicking the **<Add Phones>** button on the User List screen.

Note: Adding users manually is provided as an alternative mechanism to the more usual method of auto-discovery and user self-registration. It is primarily used when the Administrator prefers to disable phone registration (*Configuration->Dialplan->Settings->Phone Registration*) and manually provision new IP phone users.

The following screen displays.


AastraLink PRO
AASTRA
Bob Smith (x200)
About | Logout
My Phone
Users
Configuration
Maintenance
User List
Groups
Default SoftKeys
Save
Swap Phone
Cancel

Extension:
First Name:
Last Name:
Password:
Account Type: User
Operator: ☐
Outgoing Line: Any
Phone Type: Aastra9143i
MAC Address:
SIP DID Number:

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Status: Ready

Figure 3-2. Add Users Screen

You can add the following Aastra IP phone user profile parameters:

- **Extension**

  Specifies the IP phone extension for this user. You can specify any extension within the dial plan range you defined for your network. By default, the first phone registered with the AastraLink Pro 160 is assigned extension 200. When entering an extension the default valid range is 200 through 499, or 2000 through 4999, but the exact range pertains to the 'First extension' selection made by the administrator during the initial system configuration.

- **First Name**

  Specifies the first name of the user.

- **Last name**

  Specifies the last name of the user.

- **Password**

  Specifies the password currently set up for the user.

- **Account Type**

  The Account Type defines the account type (administrator or user) and associated privileges. An administrator can configure/use his own IP phone, manage other IP phones/users on the network, and manage and maintain the AastraLink Pro 160. A user can configure/use his phone only.

- **Operator**

  Specifies if this user is also an Operator. By default, the first IP phone you register with the AastraLink Pro 160 (the administrator phone) is also assigned Operator privileges. The IP phone acting in the role of Operator may be moved between users, but there must always be one phone designated as Operator.

- **Outgoing Line**

  Specifies which outgoing line this IP phone uses for outgoing calls. The term "outgoing line" refers to one of the 6 FXO ports that are located on the back of the AastraLink device.

  The default is **Any**. Alternatively, you can specify that this phone may only use a specific outgoing line for its calls. This is useful if different FXO lines have different originating CLID, and is usually used in combination with the *Configuration->Dialplan->Private Line* feature so that incoming and outgoing calls are routed using the same FXO line.

- **Phone Type**

  Specifies the model of this Aastra IP phone. Select the applicable phone from the list.

- **MAC Address**

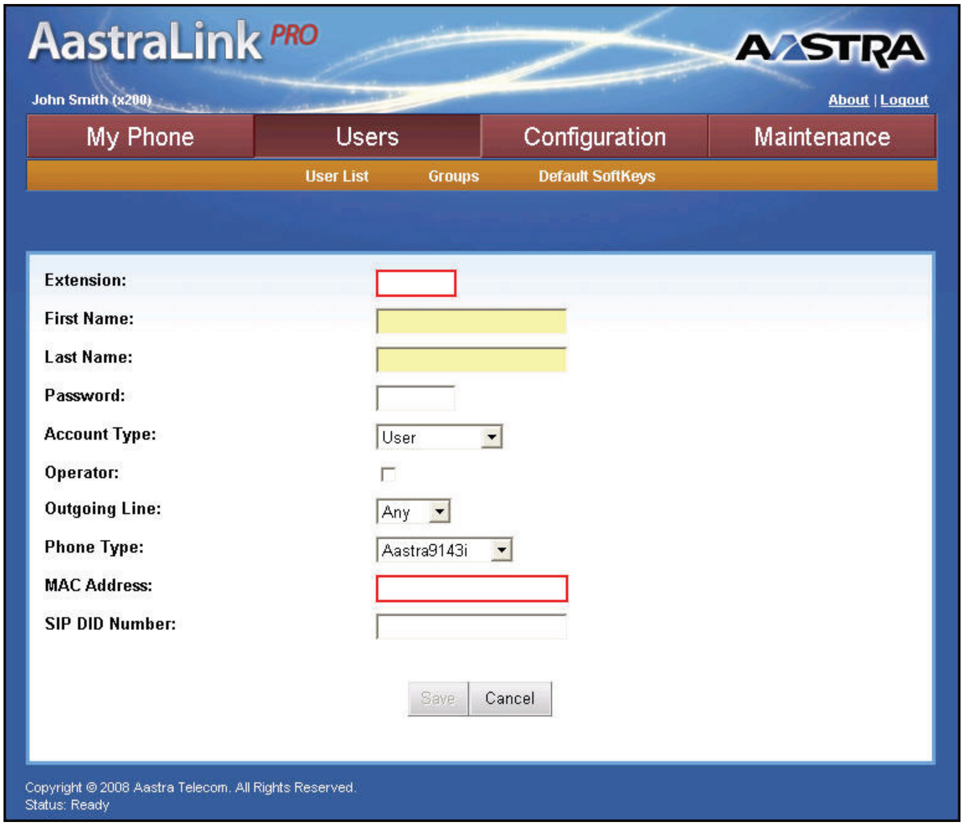
  Specifies the MAC Address assigned to this IP phone.

- **SIP DID Number**

  Specifies the SIP Direct Inward Dialing (DID) number to this IP phone. A DID number is an individual telephone number assigned to this phone that allows an outside caller to dial directly from incoming SIP trunk calls to the users extension, without having to route via the Operator or IVR menu system.

Use the following procedure to add a user profile and phone to your network.

AastraLink Web UI

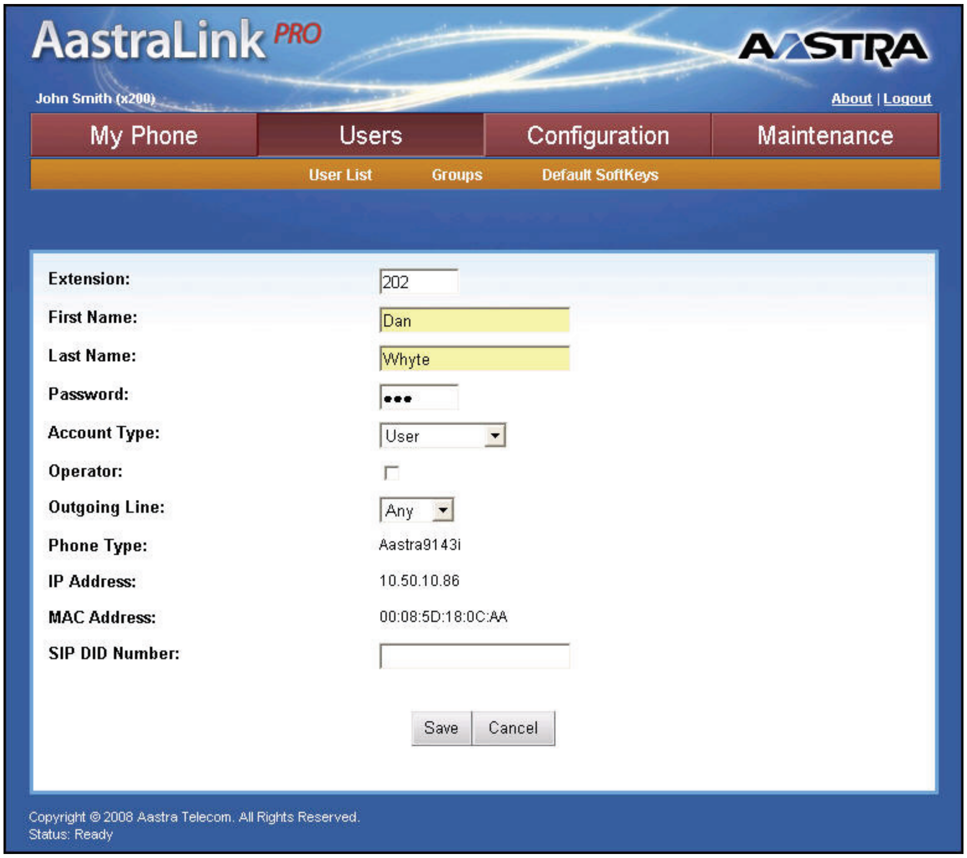
Step	Action
1	Select **Users->User List**
2	Click **<Add Phones>**. The following screen displays.  AastraLink PRO AASTRA John Smith (x200) About | Logout My Phone Users Configuration Maintenance User List Groups Default SoftKeys Save Cancel Extension: First Name: Last Name: Password: Account Type: User Operator: ☐ Outgoing Line: Any Phone Type: Aastra9143i MAC Address: SIP DID Number: Copyright © 2008 Aastra Telecom. All Rights Reserved. Status: Ready
3	In the **Extension** field, enter an extension to assign to the new user. You can specify any extension within the dial plan range you defined for your network. By default, the first phone registered with the AastraLink Pro 160 is assigned extension 200. When entering an extension the default valid range is 200 through 499, or 2000 through 4999, but the exact range pertains to the 'First extension' selection made by the administrator during the initial system configuration
4	In the **First Name** field, enter the first name of the new user.

AastraLink Web UI

Step	Action
5	In the **Last Name** field, enter the last name of the new user.
6	In the **Password** field, enter the password to assign to this new user's phone.
7	In the **Account Type** field, select whether the user and user's phone is an Administrator or User.
8	If this user is also the Operator, click on the **"Operator"** check box. The first IP phone registered with the AastraLink Pro 160 is registered as both an administrator, and Operator, by default.
9	If required, specify a line (line 1 - line 6) for this extension to use for all outgoing calls in the **"Outgoing Line"** field. Valid values are **Line 1** through **Line 6.** The default is **Any** line.
10	In the **Phone Type** field, select the phone type for this user. Valid values are: • **9143i** • **9480i** • **9480i CT** • **51i** • **53i** • **55i** • **57i** • **57i CT** Default is **9143i**.
11	In the **MAC Address** field, enter the MAC address of the phone for this user. You can find the MAC address of the phone on a label on the bottom of the phone.
12	In the **SIP DID Number** field, enter the SIP DID number for this user's phone. The DID number is the number that an outside caller can dial to reach this phone directly without having to go through the company's PBX. The DID is a direct dialed number to this phone.
13	Click **<Save>** to save your changes.

Editing User Profiles

An administrator can edit registered phones to change the identity of the user account associated with the phone. (For example, the Administrator can edit the extension, users name, password, etc.). The following illustration shows a User profile that an Administrator can edit.


AastraLink PRO
AASTRA
John Smith (x200)
About | Logout
My Phone
Users
Configuration
Maintenance
User List
Groups
Default SoftKeys
Save
Cancel

Extension:	202
First Name:	Dan
Last Name:	Whyte
Password:	●●●
Account Type:	User
Operator:	☐
Outgoing Line:	Any
Phone Type:	Aastra9143i
IP Address:	10.50.10.86
MAC Address:	00:08:5D:18:0C:AA
SIP DID Number:	

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Status: Ready

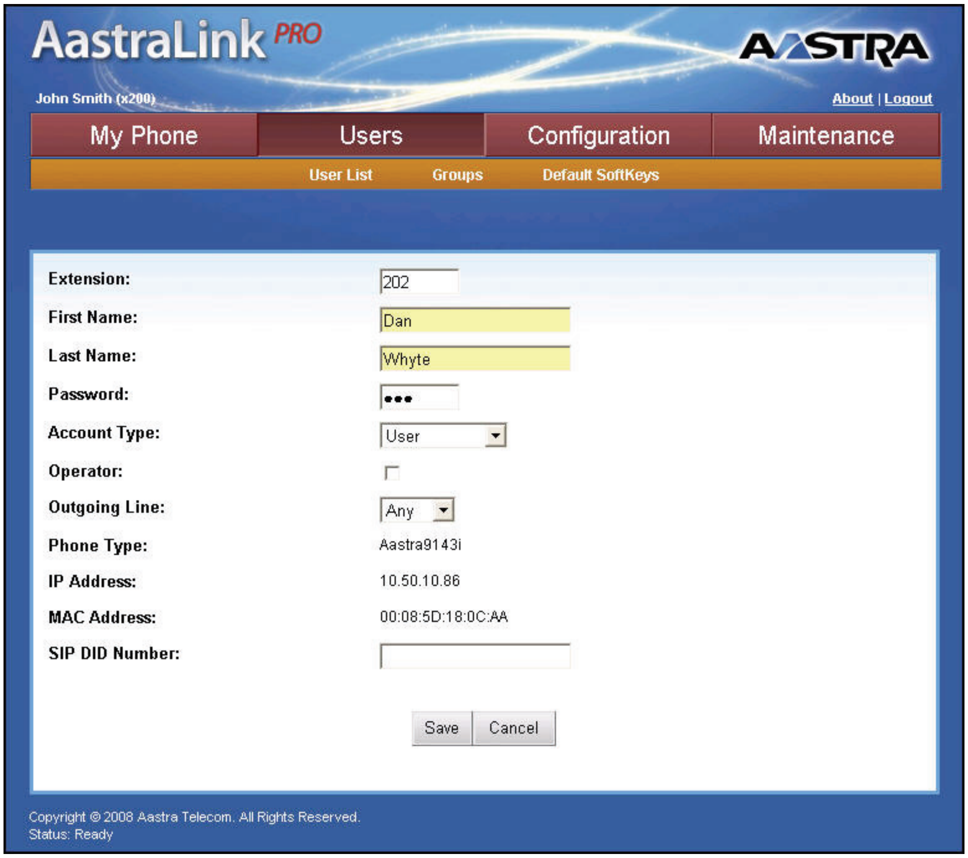
Figure 3-3. Edit Users Screen

Reference

Refer to the description of each field in the above illustration on page 3-6.

Use the following procedure to edit a user profile.

AastraLink Web UI

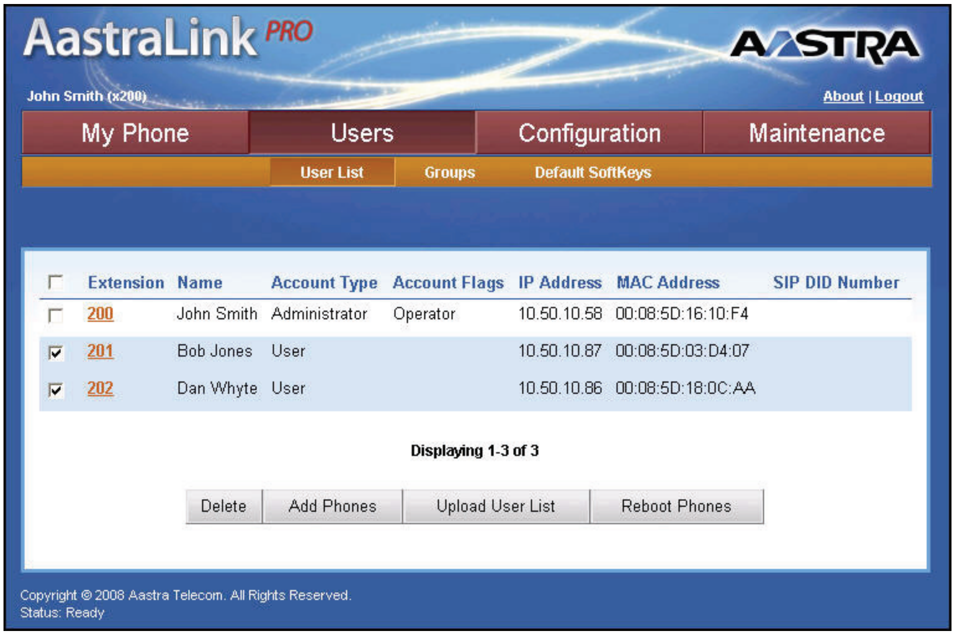
Step	Action
1	Select **Users->User List**
2	Click on the extension for the user profile you want to edit.  AastraLink PRO AASTRA John Smith (x200) About | Logout My Phone Users Configuration Maintenance User List Groups Default SoftKeys Save Cancel Copyright © 2008 Aastra Telecom. All Rights Reserved. Status: Ready Extension: 202 First Name: Dan Last Name: Whyte Password: ••• Account Type: User Operator: ☐ Outgoing Line: Any Phone Type: Aastra9143i IP Address: 10.50.10.86 MAC Address: 00:08:5D:18:0C:AA SIP DID Number: The user profile appears. You can edit personal information from this menu, specify the user type (administrator or user), and view the phone model, IP address and MAC address assigned to this phone.
3	Edit the user profile parameters as necessary (**Extension, First Name, Last Name, Password**).
4	Specify whether or not this user is an administrator in the **“Account Type”** field.

AastraLink Web UI

Step	**Action**
5	If this user is also the Operator, click on the **“Operator”** check box. The first IP phone registered with the AastraLink Pro 160 is registered as both an administrator, and Operator, by default.
6	If you wish, specify a line (line 1 - line 6) for this extension to use for all outgoing calls in the **“Outgoing Line”** field. The default is Any line.
7	Modify or delete the **SIP DID Number** if required. The DID number is the number that an outside caller can dial to reach this phone directly without having to go through the company’s PBX. The DID is a direct dialed number to this phone.
8	Click **<Save>** to save your changes.

Deleting User Profiles

An administrator can delete a user profile associated with a registered phone. When you delete a User profile, all associated information is deleted from the AastraLink Pro. (For example, the extension, first name, last name, password, etc.).


AastraLink PRO
AASTRA
John Smith (x200)
About | Logout
My Phone
Users
Configuration
Maintenance
User List
Groups
Default SoftKeys

☐	Extension	Name	Account Type	Account Flags	IP Address	MAC Address	SIP DID Number
☐	200	John Smith	Administrator	Operator	10.50.10.58	00:08:5D:16:10:F4	
☑	201	Bob Jones	User		10.50.10.87	00:08:5D:03:D4:07	
☑	202	Dan Whyte	User		10.50.10.86	00:08:5D:18:0C:AA	

Displaying 1-3 of 3

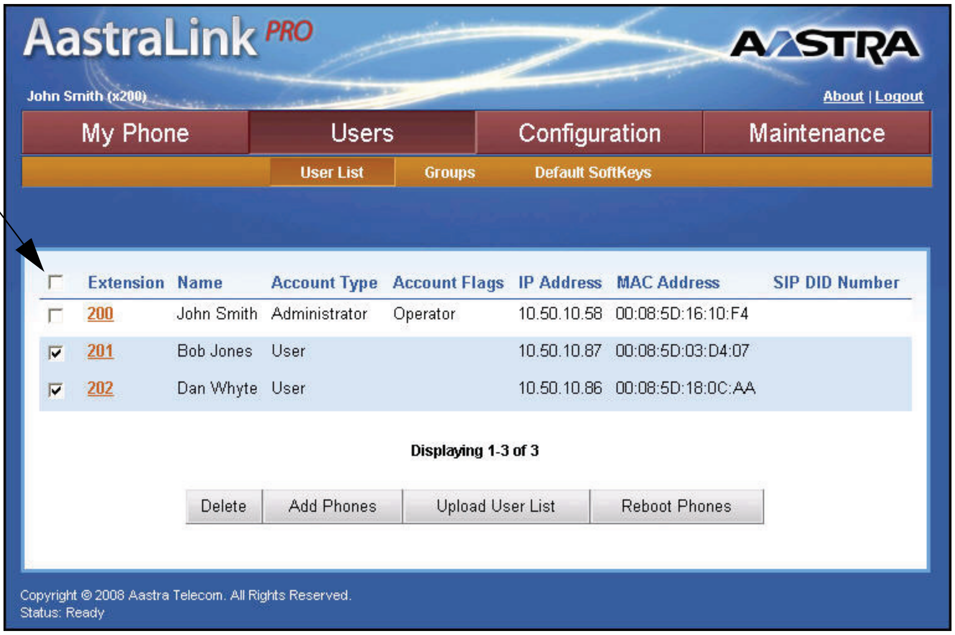
Delete
Add Phones
Upload User List
Reboot Phones
Copyright © 2008 Aastra Telecom. All Rights Reserved.
Status: Ready

Figure 3-4. Delete Users Screen

Use the following procedure to delete a user profile.

AastraLink Web UI

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>1</td><td>Select Users->User List</td></tr>
<tr><td>2</td><td>Click on the extension for the user profile or profiles you want to edit.
Note: You can select an individual user profile or multiple user profiles.



Click here to select all user profiles

AastraLink PRO
AASTRA
John Smith (x200)
About | Logout
My Phone
Users
Configuration
Maintenance
User List
Groups
Default SoftKeys
Delete
Add Phones
Upload User List
Reboot Phones

<table>
<tr><th>☐</th><th>Extension</th><th>Name</th><th>Account Type</th><th>Account Flags</th><th>IP Address</th><th>MAC Address</th><th>SIP DID Number</th></tr>
<tr><td>☐</td><td>200</td><td>John Smith</td><td>Administrator</td><td>Operator</td><td>10.50.10.58</td><td>00:08:5D:16:10:F4</td><td></td></tr>
<tr><td>☑</td><td>201</td><td>Bob Jones</td><td>User</td><td></td><td>10.50.10.87</td><td>00:08:5D:03:D4:07</td><td></td></tr>
<tr><td>☑</td><td>202</td><td>Dan Whyte</td><td>User</td><td></td><td>10.50.10.86</td><td>00:08:5D:18:0C:AA</td><td></td></tr>
</table>

Displaying 1-3 of 3

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Status: Ready</td></tr>
<tr><td>3</td><td>Click <Delete>.</td></tr>
<tr><td>4</td><td>When prompted, click <Yes> to confirm your action.

The user profile(s) you deleted no longer appear in the User List.</td></tr>
<tr><td>5</td><td>Click <Save> to save your changes.</td></tr>
</table>

Configuring User Groups

User Groups

AastraLink Pro supports the ability for the Administrator to choose a subset of IP phone extensions which operate together as a group. Groups may be associated with unique configuration for incoming call routing, and have their own voicemail and 'virtual extension' number, which is entirely separate from the extension number of the users IP phone.

Each IP phone may be a member of zero or more groups, and can overlap between multiple separate groups - for example, groups may have different membership lists, with or without any users common between two specific groups. The only provisioning restriction is that each group must have at least one IP phone as a member at all times.

Dial Plan for User Groups

You can configure the user group's list of extensions to ring at the same time. This feature is a local extension of the dialing plan for your network. A dial plan describes the number and pattern of digits that a user dials to reach a particular telephone number. The AastraLink Pro 160 uses a dial plan number (65) that specifically identifies a phone number as a User Group phone number. The "6" provides feature access, and the "5" is used for Call/User Groups. (For a table of dial plan numbers, see Chapter 4, Table 4-1 "AastraLink Pro 160 Dialplan" on page 4-32).

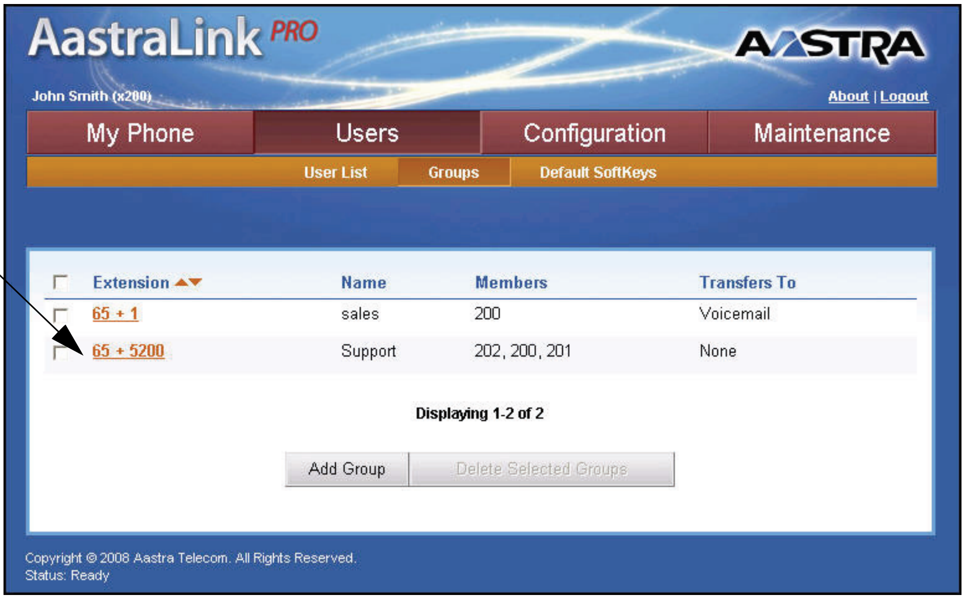
The AastraLink prepends the "65" to the User Groups's extension (for example, 655200, where "65" is the dial plan for the User Group, and "5200"is the virtual extension number for the User Group).

Virtual Extension Numbers

Groups use virtual extension numbers which do not have any restriction on their content (alphanumeric characters from 1 to 20). Although most customers may choose to use 1 or 2 digit numbers for group virtual extensions to keep their dial plan reasonable for callers, longer digit strings can be useful for 'name dialling'. To dial a User Group’s virtual extension, it is necessary to dial the 65 before the virtual extension number.

For example, if a User Group’s virtual extension is 10, the group can be reached by dialling 6510 from a SIP phone, the IVR, etc. An example for a name dialling could be '65+PIZZA' with the corresponding virtual extension of 'PIZZA' being 74992.

In the illustration below, a User Group with extension 5200 was created.


AastraLink PRO
AASTRA
John Smith (x200)
About | Logout
My Phone
Users
Configuration
Maintenance
User List
Groups
Default SoftKeys
Add Group
Delete Selected Groups

☐	Extension	Name	Members	Transfers To
☐	65 + 1	sales	200	Voicemail
☐	65 + 5200	Support	202, 200, 201	None

Displaying 1-2 of 2

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Status: Ready

User Group with extension 5200 (65 + 5200)

For more information about the AastraLink Pro 160 dial plans, see Chapter 4, the section, “Configuring Dial Plan Settings” on page 4-31.

Creating Rules for User Groups

When you create a user group, you configure group-forwarding rules for the user group that determine what happens when an incoming call goes unanswered. The following table describes the parameters you can set to configure these group-forwarding rules.

Parameter	Description
Name	Specifies the name of the User Group
Extension	Specifies the extension for the User Group. **Note:** For more information about assigning extension numbers, see the section, "Virtual Extension Numbers" on page 16.
Password	(optional) Specifies the password for the User Group
Voicemail Notification	Specifies whether or not an email is sent to the User Group to notify of a voicemail that was left by the incoming caller. Valid values are: • Off (default) • Email • Email with Audio-Attachment
Distinctive Ring	Specifies a distinctive ring for all of the member's phones in the User Group. Valid values are: • None (default - Tone 1) • Pattern 1 (Tone 2) • Pattern 2 (Tone 3) • Pattern 3 (Tone 4) • Pattern 4 (Tone 5) **Note:** For more information about ring tone patterns, see the section, "Ring Tone Patterns" on page 3-18.
Rings Before Transfer	Specifies the number of rings on the User Group's phones before transferring the incoming call. Valid values are 1 through 6. Default is 1. **Note:** Transfer of the call is based on the setting of the "Transfer to" parameter.

Parameter	Description
Transfer to	Specifies where the incoming call is transferred to if there is no answer or if there is a busy signal on the User Group's phones. Valid values are: • None (default) • Extension • Voicemail • Auto-Attendant **Note:** If you choose extension, you must specify the extension at the "Transfer Number" parameter.
Transfer Number	Specifies the phone number or extension to transfer unanswered incoming calls to. Valid values are the registered phones with their extensions in your AastraLink Pro 160 network.
Group Membership	Specifies the members of the User Group with their extensions. Only the members selected become part of the User Group you define. Default is NO MEMBERS.

Ring Tone Patterns

In IP Telephony, different ringing patterns have different frequencies and cadences. Ring cadence is the ringing pattern heard by the called party, before they pick up the call. The IP phones use the following Bellcore-specified tones by default:

Ring Tone Pattern

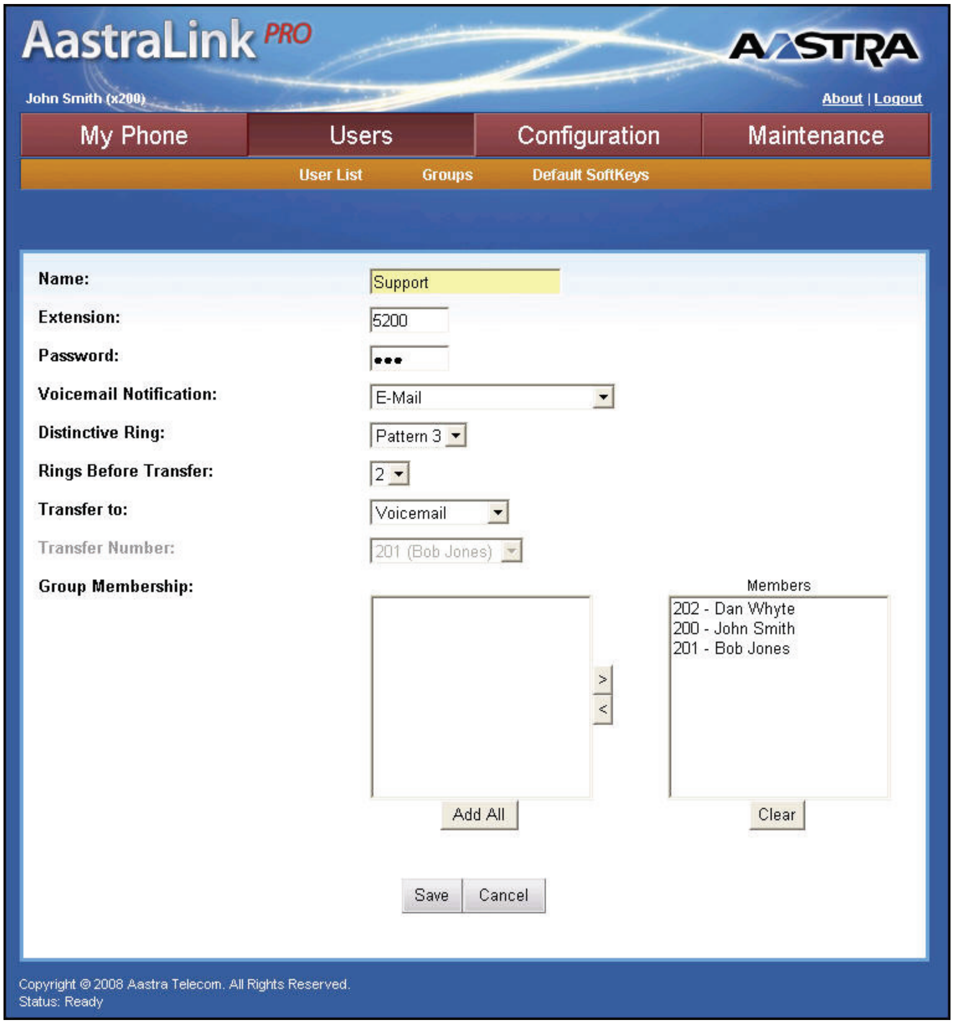
Call Criteria	Bellcore Tones
internal calls	Bellcore-dr2
external calls	Bellcore-dr3
calls with contact list	Bellcore-dr4
calls with specific time frames	Bellcore-dr5

The following table identifies the different Bellcore ring tone patterns and cadences.

Bellcore Tone	Pattern ID	Pattern	Cadence	Minimum Duration (ms)	Nominal Duration (ms)	Maximum Duration (ms)
(Standard)	1	Ringing Silent	2s On 4s Off	1800 3600	2000 4000	2200 4400
Bellcore-dr2	2	Ringing Silent	Long	630 315	800 400	1025 525
		Ringing Silent	Long Long	630 3475	800 4000	1025 4400
Bellcore-dr3	3	Ringing Silent	Short	315 145	400 200	525 525
		Ringing Silent	Short	315 145	400 200	525 525
		Ringing Silent	Long	630 2975	800 4000	1025 4400
Bellcore-dr4	4	Ringing Silent	Short	200 145	300 200	525 525
		Ringing Silent	Long	800 145	1000 200	1100 525
		Ringing Silent	Short	200 2975	300 4000	525 4400
Bellcore-dr5	5	Ringing		450	500	550

Example of a User Group

The following illustration shows an example of a configured User Group.


AastraLink PRO
AASTRA
John Smith (x200)
About | Logout
My Phone
Users
Configuration
Maintenance
User List
Groups
Default SoftKeys
Members
>
<
Add All
Clear
Save
Cancel

Name:	Support
Extension:	5200
Password:	●●●
Voicemail Notification:	E-Mail
Distinctive Ring:	Pattern 3
Rings Before Transfer:	2
Transfer to:	Voicemail
Transfer Number:	201 (Bob Jones)
Group Membership:	202 - Dan Whyte 200 - John Smith 201 - Bob Jones

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Status: Ready

In the illustration above, a User Group named "**Support**" is defined with three members:

Extension **200, John Smith**
Extension **201, Bob Jones**
Extension **202, Dan Whyte**

The User Group's "Extension" is **5200**; "Voicemail Notification" is set for **Email**; "Distinctive Ring" is set for **Pattern 3**; "Ring Before Transfer" is set to **2**; and "Transfer to" is set to **Voicemail**.

So in the above configuration, when a call comes into the Support User Group at extension 5200, the phones at extension 200, 201, and 202 ring for at least 2 rings with a specific ring pattern identified for Support. If the incoming call is not answered within 2 rings, the call is transferred to voicemail so the caller can leave a message. An email notification of the voicemail is also sent to all three members email addresses (defined at the location *My Phone->Preferences*).

Adding a User Group

Use the following procedure to add a new User Group.

AastraLink Web UI

Step	Action
1	Select **Users->Groups**
2	Click **<Add Group>**
3	Specify a name for the user group in the **"Name"** field. For example: **Sales**
4	Specify a user group extension for the group in the **"Extension"** field. Valid values are from 1 to 20 alphanumeric characters. For example: **300** or **74992** **Note:** For more information about assigning extension numbers, see the section, "Virtual Extension Numbers" on page 16.
5	Specify a password for the group in the **"Password"** field.

AastraLink Web UI

Step	Action
6	Select the method you want to use to be notified that a voicemail has been recorded for the user group, in the **"Voicemail Notification"** field. Valid values are: • **Off** (default - disables voicemail notification) • **Email** • **Email with Audio Attachment** **Note:** Since User Groups use virtual extensions, these extensions do not have an email address. If the "Voicemail Notification" parameter is enabled, voicemail notifications are sent to the individual email address for each member of the User Group (configured at the location *My Phone->Preferences*).
7	Select the distinctive ring pattern you want to apply to this user group, in the **"Distinctive Ring**" field. Valid values are: • **None** (default - Tone 1) • **Pattern 1** (Tone 2) • **Pattern 2** (Tone 3) • **Pattern 3** (Tone 4) • **Pattern 4** (Tone 5) **Note:** For more information about ring tone patterns, see the section, "Ring Tone Patterns" on page 3-18.
8	Set the number of times the phone rings before being transferred in the **"Rings Before Transfer"** field.
9	Specify the destination where incoming calls should be transferred in the **"Transfer To"** field. Valid values are: • **None** (default) • **Extension** • **Voicemail** • **Auto-Attendant**
10	If you set the **"Transfer To"** field to **Extension**, then specify the extension to which incoming calls should be transferred in the **"Transfer Number"** field. For example: **200 (John Smith).**

AastraLink Web UI

Step	Action
11	In the "**Group Membership**" field, do one of the following actions: • To add individual users to the group, click on the user name, then click > to move the user from the **Available** list to the **Members** list. • To add multiple users to the group, press and hold the **<Ctrl>** key, select the users, then click > to move the user from the **Available** list to the **Members** list. • To add all users to the group, click <**Add All>.**
12	Click **<Save>** to save your changes.

Editing a User Group

Use the following procedure to edit a User Group that you have previously configured.

AastraLink Web UI

Step	Action
1	Select **Users->Groups**
2	Click on the extension for the user group that you want to edit.
3	Edit the user group parameters as necessary. To add or delete user group members, do one of the following actions: • To add individual users to the group, click on the user name, then click > to move the user from the **Available** list to the **Members** list. • To delete individual users from the group, click on the user name, then click < to remove the user from the **Members** list. • To add all users to the group, click **Add All**
4	Click **<Save>** to save your changes

Deleting a User Group

Warning: If you delete a User Group, voicemails for the group become inaccessible (but are not removed). Therefore, you must ensure that the voice mailbox is emptied before a group is deleted.

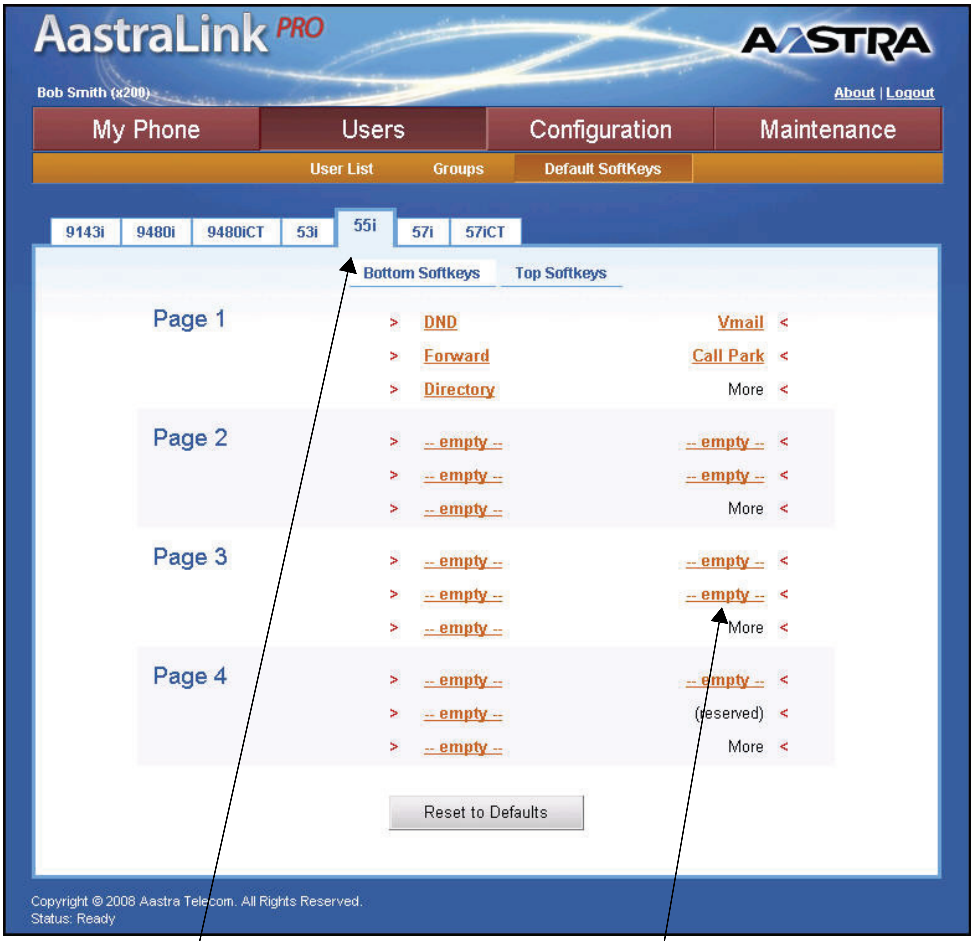
Use the following procedure to delete a User Group.

AastraLink Web UI

Step	Action
1	Select **Users->Groups**
2	Click on the checkbox(s) for the user group that you want to delete.
3	Click **<Delete Selected Groups>**
4	When prompted, click **<Yes>** to confirm your action. The user group you deleted no longer appears on the user group list.

Default Softkeys (Users Menu)

You configure softkey default settings from the **Users->Default Softkeys** menu.


AastraLink PRO
AASTRA
Bob Smith (x200)
About | Logout
My Phone
Users
Configuration
Maintenance
User List
Groups
Default SoftKeys
9143i
9480i
9480iCT
53i
55i
57i
57iCT
Bottom Softkeys
Top Softkeys
Reset to Defaults
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Status: Ready

Page 1
> DND — Vmail <
> Forward — Call Park <
> Directory — More <

Page 2
> -- empty -- — -- empty -- <
> -- empty -- — -- empty -- <
> -- empty -- — More <

Page 3
> -- empty -- — -- empty -- <
> -- empty -- — -- empty -- <
> -- empty -- — More <

Page 4
> -- empty -- — -- empty -- <
> -- empty -- — (reserved) <
> -- empty -- — More <

Shows which model Aastra IP phone(s) you are currently configuring

“Empty” softkeys are not yet configured

Figure 3-5. **Default Softkeys Menu**

Using the Default Softkeys Menu (User Phone)

Softkeys function exactly like the hard keys on your phone, except they are programmable. When you press a softkey on your IP phone, an action takes place. For example, when you press the DND softkey, you enable Do Not Disturb on your phone.

As administrator, you have the option to change the default softkey settings for configurable softkeys for each User's phone. (those that have been assigned a softkey type, or are empty). That is, you can use the AastraLink Web UI to:

- Add new softkeys
- Delete softkeys
- Edit a softkey so it performs a different function (for example, change a Park Call softkey to a Speeddial softkey).

Default softkey profiles the administrator defines are applied only to the model phone you are configuring.

The Default Softkeys menu lists all Aastra phones models that may be connected to your AastraLink network, and the default softkeys currently configured for each phone model. If you click on the tab for a specific phone, the menu changes to show the current softkey configuration for that model phone.

For some model phones, certain softkeys are reserved and cannot be edited. For example, on the Aastra IP Phone Model 9143i, the first four softkeys are pre-programmed as follows: *Options*, *Directory, Save, Delete*. These softkeys cannot be edited or deleted by the administrator, or by the user.

Default softkey profiles the administrator defines are applied to any new Aastra IP phones of that particular model that you add to your network. That is, when you initially start up and register an IP phone with the AastraLink Pro 160, the default softkeys you specify from this menu are programmed automatically on the IP phone. Later, users have the option to change the default settings, add additional softkeys or delete softkeys from their own IP phones.

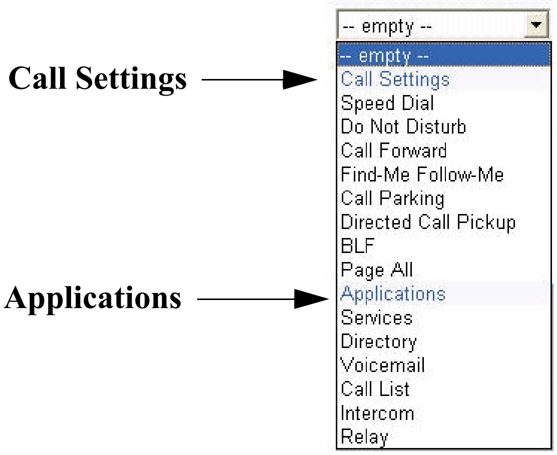
Note: If a user has defined a custom softkey list for an IP phone, then the custom softkey list is maintained. Any changes made by the administrator to default softkey settings do not apply to the User's IP phone.

Softkey Types (User Phone)

Depending on the phone model you are configuring, there are several different types of softkeys available for you to configure for the IP phones on your network. Each softkey type performs a different function.

On the AastraLink Web UI, you can configure softkeys for the administrator phone and the user phones. Softkeys are organized by type into the following categories:

- **Call Settings Softkeys** - used to specify how inbound/outbound calls are handled. For example, Do Not Disturb, or Call Forwarding.
- **Applications Softkeys** - used to access applications (Voicemail) or phone menus (the Service menu).


-- empty --
Call Settings
Call Settings
Speed Dial
Do Not Disturb
Call Forward
Find-Me Follow-Me
Call Parking
Directed Call Pickup
BLF
Page All
Applications
Applications
Services
Directory
Voicemail
Call List
Intercom
Relay

Depending on the model IP phone you are using, certain softkey types are not available. For example, the Transfer and Conference softkeys are only applicable to phone models that do not have dedicated hard keys for those functions.

The following tables describe each type of softkey available, and provide more information about using the softkey.

Call Settings Softkeys (User Phone)

The table below describes the call settings softkeys you can configure for the Aastra IP phones on your AastraLink network. The table describes each softkey type, function, label, and value (where applicable).

Softkey Type	Function	Label	Value
Speed Dial	Allows you to dial a phone number/ extension using a softkey.	The name of the person you want to speeddial. For example: Dan Jones	The phone number or ext to speeddial. For example: 285
Do Not Disturb	Stops your IP phone from ringing when an incoming call is received.	n/a	n/a
Call Forward	Allows you to forward incoming calls to another destination.	n/a	n/a
Find Me, Follow Me	Allows you to specify other phone numbers that should be used to try to reach you. For example, your work phone number and your cell phone number.	n/a	n/a
Park Call	Allows you to “park” a call in order to retrieve it later, from another IP phone. See the *AastraLink IP Phone User’s Guide* for more information about using the Park Call feature.	n/a	n/a

Softkey Type	Function	Label	Value
Directed Call Pickup	Allows you to intercept - or pickup - a call on a monitored extension. When you press the DCP softkey, your IP phone displays a list of currently ringing numbers. You select the call you want to “pickup“ (intercept) from this list and are connected to the call. Refer to the *AastraLink IP Phone User’s Guide* for instructions on how to intercept calls using the Directed Call Pickup feature.	n/a	n/a
BLF	Busy Lamp Field. Allows you to monitor a specific extension for state changes (busy, idle and ringing). When you configure a BLF softkey, an indicator (either an icon or a LED) displays on your IP phone next to the softkey. The icon shows whether the extension you are monitoring is “busy” (on the phone) or “idle.” Refer to the *AastraLink IP Phone User’s Guide* for instructions on how to monitor calls using BLF softkeys. **Note:** It is not recommended to use BLF in the default softkey profiles, since BLF is applied to all users of the selected phone model. BLF imposes realtime overhead on the AastraLink call processing which may degrade overall system performance if applied too gratuitously.	The name of the person whose extension you are monitoring For example: Joe Smith	The phone number or extension to monitor. For example: 255

Softkey Type	Function	Label	Value
Page All	Indicates the key is configured as a Paging key. Pressing this key initiates an immediate multicast RTP stream to the pre-configured multicast group address provisioned by the AastraLink Pro 160.	n/a	n/a
Transfer	Allows you to transfer a call to another extension. **Note:** Consultative transfer and blind transfer are supported for calls to SIP extensions; consultative transfer is supported for calls to ring groups.	n/a	n/a
Conference	Allows you to set up a conference call between two or more active calls.	n/a	n/a
Intercom	Allows you to connect with a remote extension using the intercom.	n/a	n/a

Application Softkeys (User Phone)

The following table describes the application softkeys you can configure for the Aastra IP phones on your AastraLink network.

Softkey Type	Function
Services	Displays the Services list. From the Services list, you can access these other services and applications: • Voicemail • Directory • Recent Calls List • Call Settings • Relay • Pickup Call • Park Call
Directory	Displays the Directory list. From the Directory list, you can: • Access your Personal directory • Access the Corporate directory • Search for a contact in either directory
Voicemail	Allows you to connect to Visual Voicemail. When you press the Vmail softkey, the Visual Voicemail menu appears on your Phone UI. After you login to your voicemail account, you can view details about your voicemail messages on your phone UI, play messages, store/forward/save/delete messages, or manage your voicemail preferences from this menu. To configure voicemail rules for your IP phone, see “Configuring Visual Voicemail Settings” on page 4-13.

Softkey Type	Function
Call List	Allows you to access the Recent Calls list.
Relay	Allows an operator/user to monitor an external device (such as a locked entrance door), and use a softkey to change the status of the device (unlock the door) when an alarm is triggered. To configure a Relay for your IP phone, see "Configuring Push Button Trigger Input or Relay Output" on page 4-10

Note: When you add or delete a softkey, the changes to your IP phone are usually dynamic. However, some softkey types (BLF, for example) require you to restart the phone in order for the changes to take affect.

Adding a Default Softkey (User Phone)

Use the following procedure to add/define a new default softkey for the Aastra IP phones in your network.

AastraLink Web UI

Step	Action
1	Select **Users->Default SoftKeys**
2	Click on the tab for the model Aastra IP phones you are configuring.
3	Click on an **<empty>** softkey.
4	Select the **"Softkey Type"** from the pull-down menu, then click **<Save>** **Note:** If you are configuring a Speeddial or BLF softkey, you must also assign a label/value to the softkey. See "Softkey Types (User Phone)" on page 3-27 for more information.

Editing a Default Softkey (User Phone)

Use the following procedure to edit an existing default softkey for the Aastra IP phones in your network.

AastraLink Web UI

Step	Action
1	Select **Users->Default Softkeys**
2	Click on the tab for the model Aastra IP phones you are configuring.
3	Click on the softkey you want to edit.

AastraLink Web UI

Step	Action
4	Select a different **"Softkey Type"** from the pull-down menu.
5	Click **<Save>** to save your changes. The Default Softkeys menu updates to reflect your changes.

Deleting a Default Softkey (User Phone)

Use the following procedure to delete a default softkey from the Aastra IP phones on network.

AastraLink Web UI

Step	Action
1	Select **Users->Default SoftKeys**
2	Click on the tab for the model Aastra IP phones you are configuring.
3	Click on the softkey you want to delete.
4	Click **<Delete>** The softkey is removed from the Default Softkeys list and is reset to **<empty>**.

Softkeys for Expansion Modules (User Phone)

You add, edit, and delete softkeys for an expansion module attached to your IP phone the same way you do for the IP phone itself. See "Adding a Default Softkey (User Phone)" on page 3-33, "Editing a Default Softkey (User Phone)" on page 3-33, and "Deleting a Default Softkey (User Phone)" on page 3-34.

In addition, you can use the Web UI to download the corporate directory and quickly configure speeddial softkeys on the module, as described in the following procedure.

AastraLink Web UI

Step	Action
1	Select **Users->Default Softkeys-> Expansion Module 1.** **Note:** The AastraLink Pro 160 supports only one expansion module per phone.
2	Click **Corporate Directory.** The AastraLink begins to download and configure the expansion module with the corporate directory contacts. When the process complete, a message appears confirming that the download is complete. If you view the expansion module UI, you will see speed dials configured for each person listed in the corporate directory.

Restoring Default Softkeys Back to Factory Settings

Use the following procedure to set the default softkeys back to their original, factory default settings.

AastraLink Web UI

Step	**Action**
1	Select **Users->Default SoftKeys**
2	Select which model Aastra IP phones you are configuring from the **"Phone Type"** pull-down menu.
3	Click **<Reset to Defaults>** The original, default softkey settings are restored.

Chapter 4
Configuring AastraLink Pro 160 System and Network Parameters

About this Chapter

Introduction

This chapter describes how to configure AastraLink Pro 160 system and network management parameters. These parameters apply to the AastraLink device itself.

For a procedure on setting up your AastraLink Pro 160 manually, see Appendix

Topics

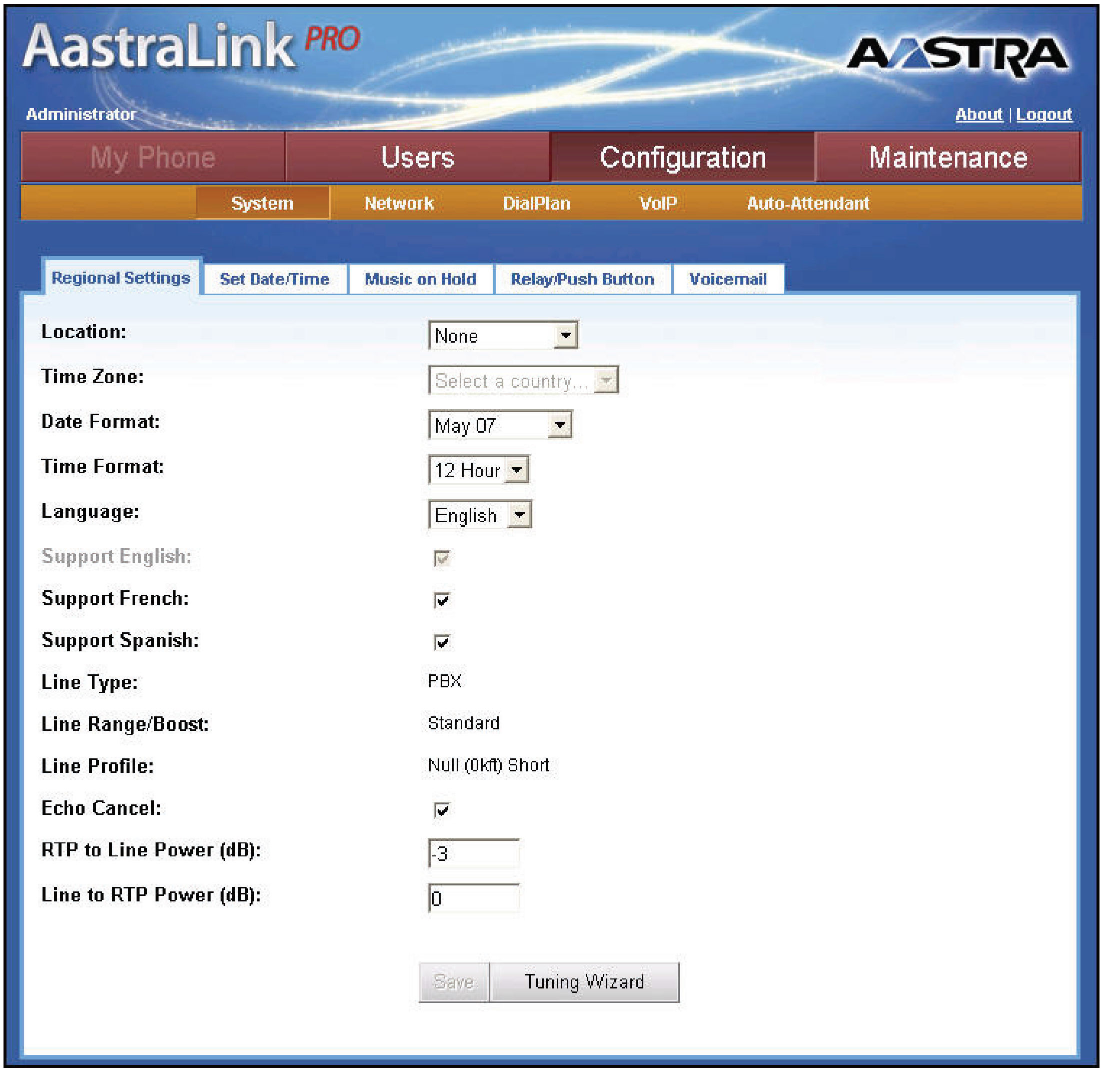
This chapter covers the following topics:

Topic	Page
Accessing the Configuration Menu	page 4-3
Configuring System Settings	page 4-4
Specifying Regional Settings	page 4-4
Specifying the Date and Time	page 4-8
Configuring the Music On Hold Option	page 4-9
Configuring Push Button Trigger Input or Relay Output	page 4-10
Configuring Visual Voicemail Settings	page 4-13
Configuring Network Settings	page 4-15
Editing Local Network Settings	page 4-16

Topic	Page
Editing Local Service Settings	page 4-19
Editing External Services Settings	page 4-27
Configuring Dial Plan Settings	page 4-31
Local Dial Plan	page 4-32
Star Codes	page 4-33
Specifying Dial Plan Settings	page 4-33
Configuring Overhead Paging	page 4-35
Configuring an Emergency Dial Plan	page 4-36
Configuring Barred Numbers	page 4-37
Configuring Private Lines	page 4-39
Configuring Abbreviations	page 4-41
Configuring VoIP Settings	page 4-47
SIP Trunking	page 4-48
SIP Direct Inward Dialing (DID)	page 4-55
AastraLink Trunking	page 4-58
Configuring Auto-Attendant	page 4-66
How Auto-Attendant Works	page 4-67
Settings for the Auto-Attendant	page 4-68
Schedule for the Auto-Attendant	page 4-75
Holidays for the Auto-Attendant	page 4-79
Custom Recordings	page 4-82
Configuring Audio Settings (Tuning Wizard)	page 4-84
Using the AastraLink Audio Tuning Wizard	page 4-85

Accessing the Configuration Menu

You configure all system and network parameters for the AastraLink Pro 160 from the **Configuration** menu, shown below.


AastraLink PRO
AASTRA
Administrator
About | Logout
My Phone
Users
Configuration
Maintenance
System
Network
DialPlan
VoIP
Auto-Attendant
Regional Settings
Set Date/Time
Music on Hold
Relay/Push Button
Voicemail
Save
Tuning Wizard

Location: None
Time Zone: Select a country...
Date Format: May 07
Time Format: 12 Hour
Language: English
Support English: ☑
Support French: ☑
Support Spanish: ☑
Line Type: PBX
Line Range/Boost: Standard
Line Profile: Null (0kft) Short
Echo Cancel: ☑
RTP to Line Power (dB): -3
Line to RTP Power (dB): 0

Figure 4-1. **AastraLink Web UI Configuration Menu**

Configuring System Settings

You configure AastraLink Pro 160 system settings from the **Configuration->System Settings** menu.

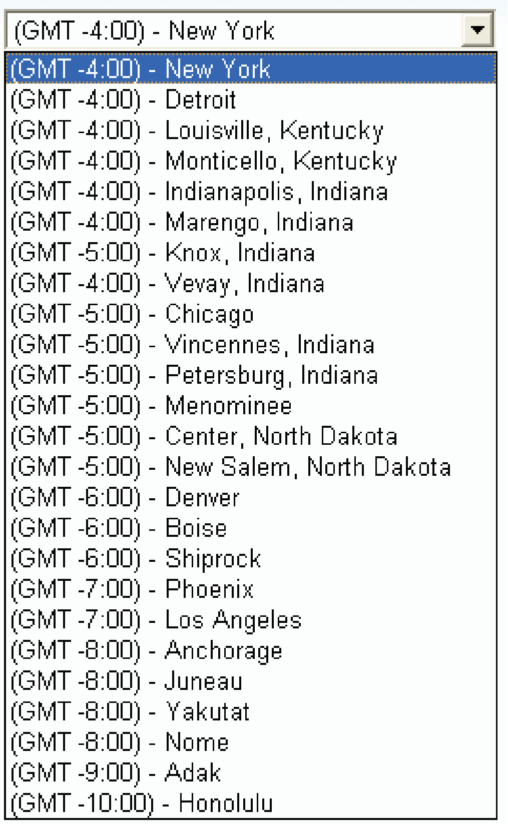
Specifying Regional Settings

Use the following procedure to specify regional settings for your AastraLink Pro 160.

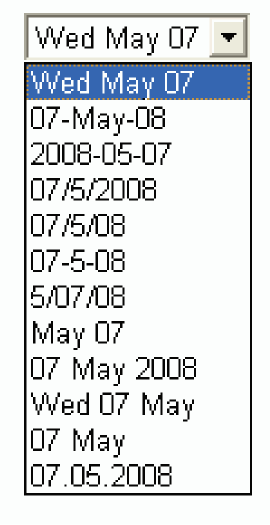
AastraLink Web UI

Step	Action
1	Select **Configuration->System Settings->Regional Settings.**
2	Set **<Location>** to the country where you installed the AastraLink Pro 160. Default is **None**. Valid values are: • **None** (default) • **Canada** • **United States** • **Mexico** **Note:** The use of “**None**“ is not supported. A valid country must be set during initial greenfield configuration.

AastraLink Web UI

Step	Action
3	The “**Time Zone**” field is disabled by default, until you select a country in Step 2. Select a **Time Zone** that maps to your location. Default is “Select a country”. Valid values are:  (GMT -4:00) - New York (GMT -4:00) - New York (GMT -4:00) - Detroit (GMT -4:00) - Louisville, Kentucky (GMT -4:00) - Monticello, Kentucky (GMT -4:00) - Indianapolis, Indiana (GMT -4:00) - Marengo, Indiana (GMT -5:00) - Knox, Indiana (GMT -4:00) - Vevay, Indiana (GMT -5:00) - Chicago (GMT -5:00) - Vincennes, Indiana (GMT -5:00) - Petersburg, Indiana (GMT -5:00) - Menominee (GMT -5:00) - Center, North Dakota (GMT -5:00) - New Salem, North Dakota (GMT -6:00) - Denver (GMT -6:00) - Boise (GMT -6:00) - Shiprock (GMT -7:00) - Phoenix (GMT -7:00) - Los Angeles (GMT -8:00) - Anchorage (GMT -8:00) - Juneau (GMT -8:00) - Yakutat (GMT -8:00) - Nome (GMT -9:00) - Adak (GMT -10:00) - Honolulu

AastraLink Web UI

Step	Action
4	Specify the **<Date Format>** for your Aastra IP phones. Default format is <Month><Year>. Valid formats are:  Wed May 07 Wed May 07 07-May-08 2008-05-07 07/5/2008 07/5/08 07-5-08 5/07/08 May 07 07 May 2008 Wed 07 May 07 May 07.05.2008
5	Specify the **<Time Format>.** Default is **12 hour.** Valid values are: • **12 hour** • **24 hour**
6	Specify the default AastraLink Pro 160 system **<Language>.** Valid values are: • **English** (default) • **French** • **Spanish** The language you specify here is the default language used for all text displayed on the IP phones, as well as the default voicemail language for all callers.

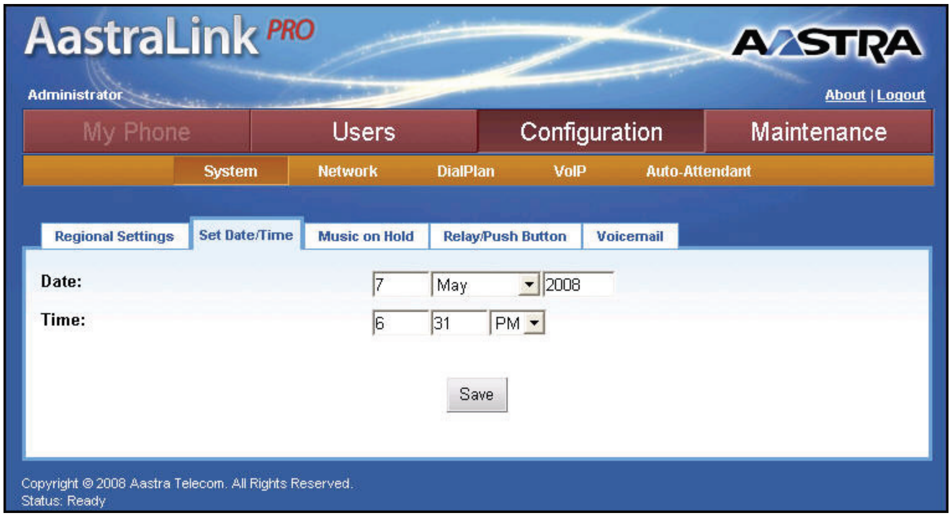
AastraLink Web UI

Step	Action
7	To support additional languages for the auto-attendant announcement, click on any of the following parameters. Only the system language set by the administrator during initial greenfield configuration is enabled by default. • **Support English** • **Support French** • **Support Spanish** **Note:** Adding additional languages may require the IP phones to reboot, in order to download the new language pack.
8	To specify settings for the **Line Type**, **Line Range/Boost**, and **Line Profile**, you must use the AastraLink Tuning Wizard. For instructions, see "Using the AastraLink Audio Tuning Wizard" on page 4-85.
9	In the "**Echo Cancel**" field, echo cancellation is enabled by default. This parameter enables echo cancellation for the FXO lines. Disable this parameter by unchecking the box. **Note:** Aastra recommends echo cancellation should always be enabled in normal use; re-enable it after running the tuning wizard if required.
10	Specify the decibels to use for power when Real Time Transport Protocol (RTP) is sent TO the line, in the "**RTP to Line Power (dB)**" field.Valid range is **+6 dB to –14 dB**. Default is **-3**. **Note:** Aastra recommends you DO NOT change the default setting for this parameter because of FCC regulatory compliances.
11	Specify the decibels to use for power when Real Time Transport Protocol (RTP) is sent FROM the line, in the "**Line to RTP Power (dB)**" field. Valid range is **+6 dB to –14 dB**. Default is **0**. **Note:** Aastra recommends you DO NOT change the default setting for this parameter because of FCC regulatory compliances.
12	Click **<Save>** to save your changes.

Specifying the Date and Time

If automatic time and date were enabled during the initial administrator setup of the system (default set to **yes** during initial setup), the AastraLink Pro 160 uses the Network Time Protocol (NTP) to synchronize its date and time from the Internet global time servers. If Internet access is not available, then use the following procedure to manually set the date and time for your AastraLink Pro 160.

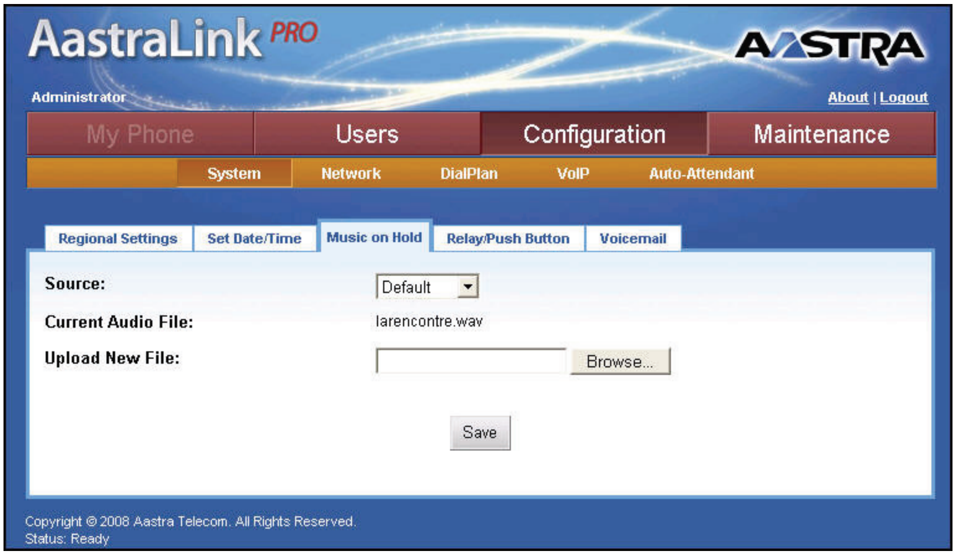
AastraLink Web UI

Step	Action
1	Select **Configuration->System->Set Date/Time.**  AastraLink PRO AASTRA Administrator About | Logout My Phone Users Configuration Maintenance System Network DialPlan VoIP Auto-Attendant Regional Settings Set Date/Time Music on Hold Relay/Push Button Voicemail Save Date: 7 May 2008 Time: 6 31 PM Copyright © 2008 Aastra Telecom. All Rights Reserved. Status: Ready
2	In the "**Date**" field, specify the date that the AastraLink Pro displays on the IP phones in your network. Default is **7 May 2008**.
3	In the "**Time**" field, specify the time that the AastraLink Pro displays on the IP phones in your network. Default is the current time set on the AastraLink Pro 160.
4	Click **<Save>** to save your changes.

Configuring the Music On Hold Option

The AastraLink provides a default audio file for the Music on Hold feature. You have the option to upload a custom audio file for Music on Hold. The audio file format must be as follows: Microsoft WAV format, 8KHz PCM, mono, 16-bit signed linear. The audio source can either be a WAV file, or a direct connection between the AastraLink Pro 160 Music on Hold stereo jack (located on the back of the device) and an audio device (CD player).

AastraLink Web UI

Step	Action
1	Select **Configuration->System->Music on Hold.**  AastraLink PRO AASTRA Administrator About | Logout My Phone Users Configuration Maintenance System Network DialPlan VoIP Auto-Attendant Regional Settings Set Date/Time Music on Hold Relay/Push Button Voicemail Browse... Save Copyright © 2008 Aastra Telecom. All Rights Reserved. Status: Ready Source: Default Current Audio File: larencontre.wav Upload New File:
2	In the "**Source**" field, specify the source of the Music on Hold: either an audio file, or a direct connection (line in) between the AastraLink device and an audio device. Valid values are: • **Default** (default setting) • **Line In** • **Audio File** **Note:** The current audio file (default file) is listed in the "**Current Audio File**" field. In the screen in Step 1, the audio file name is "**larencontre.wav**".

AastraLink Web UI

Step	Action
3	In the "**Upload New File**" field, click **<Browse>** and locate a new audio *.wav* file that you want to use for Music on Hold. Upload the file to the AastraLink Pro.
4	Click **<Save>** to save your changes.

Configuring Push Button Trigger Input or Relay Output

The AastraLink includes two optional, programmable features - Push Button Trigger Input and Relay Output - that allow you monitor and/or change the status of external devices connected to the AastraLink. Both features work in conjunction with your IP phones, as described below:

- **Push Button Trigger Input**: To enable the trigger feature, you connect an external device (for example, a motion-detector alarm system) to the input connectors on the back of the AastraLink. When triggered (for example, motion is detected in an alarmed corridor), the AastraLink can respond by sending a text message, and/or an audio message, to the IP phone that you specify.

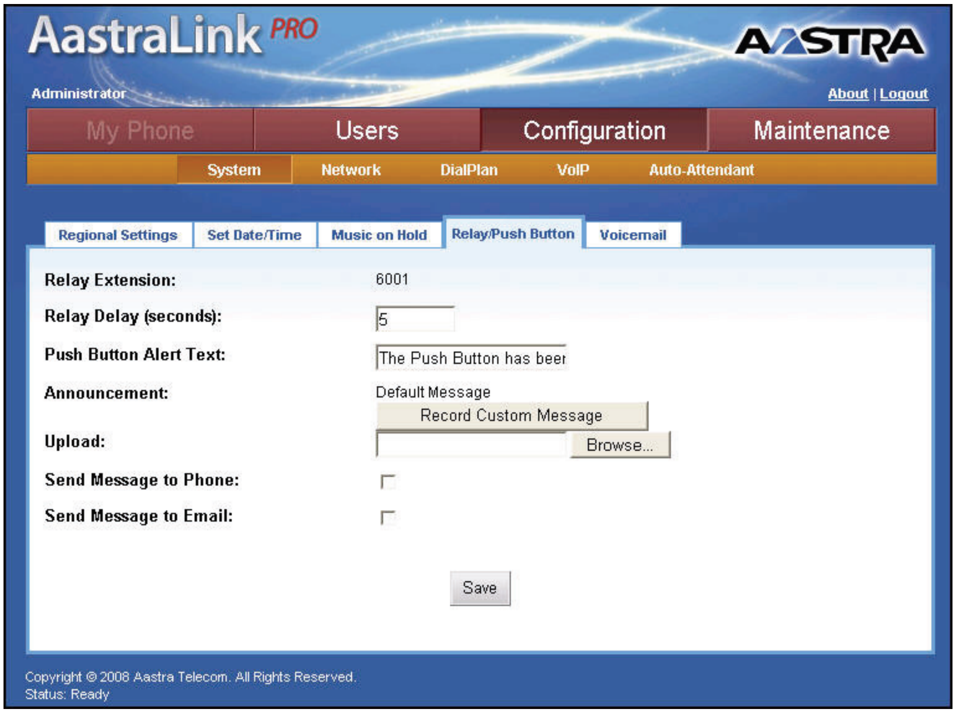
Note: There is no default action configured for Push Button Trigger. If you wish, you can configure a custom text message, and a custom audio message, using the AastraLink Web UI. For example, you may want to send a text or audio message that says "Motion Sensors Activated" to your IP phone.

- **Relay Output:** To enable the relay feature, you connect an external device (for example, a locked entrance door) to the relay I/O port on the back of the AastraLink. You activate the relay - that is, change the status of the external device - by pressing a Relay softkey on your IP phone, or by dialing a preconfigured number. In this example, the relay unlocks the entrance door.

You may want to configure the Push Button Trigger feature and the Relay feature to operate with the same external device. For example, suppose you want the Operator to monitor and control a locked entrance door. In this scenario, you could connect the entrance doorbell to the Push Button Trigger, and the locked entrance door to the Relay I/O port. When the doorbell is pressed, the Aastralink sends a message to the Operator IP phone that someone is requesting entrance into the building. The Operator can then unlock the door by pressing the Relay softkey on the IP phone.

Use the following procedure to configure the Trigger or Relay features.

AastraLink Web UI

Step	Action
1	Select **Configuration->System->Relay/Push Button.**  AastraLink PRO AASTRA Administrator About | Logout My Phone Users Configuration Maintenance System Network DialPlan VoIP Auto-Attendant Regional Settings Set Date/Time Music on Hold Relay/Push Button Voicemail Record Custom Message Browse... Save Relay Extension: 6001 Relay Delay (seconds): 5 Push Button Alert Text: The Push Button has beer Announcement: Default Message Upload: Send Message to Phone: ☐ Send Message to Email: ☐ Copyright © 2008 Aastra Telecom. All Rights Reserved. Status: Ready
2	In the "**Relay Delay (seconds)**" field, specify a delay time for the relay. Valid range is **1 to 99** seconds. Default is **5**.

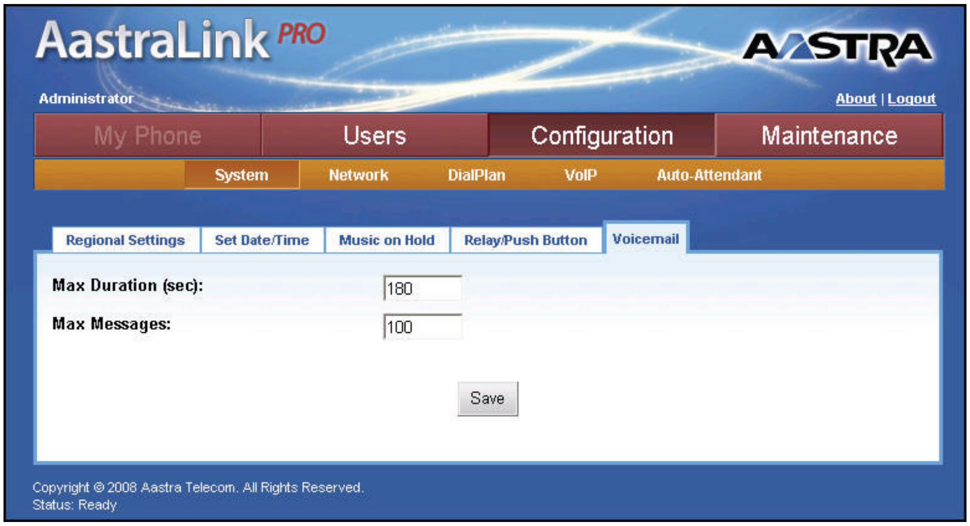
AastraLink Web UI

Step	**Action**
3	In the **"Push Button Alert Text"** field**,** specify a custom alert text message. The default text message is: "*The Push Button has been pressed*."
4	(optional) The AastraLink Pro has a default message announcement that announces after pushing the relay button. To record a custom announcement, click **<Record Custom Message>**. Your IP phone rings. Follow the instructions as prompted by your IP phone to record and save a new message.
5	(optional) You can upload a message announcement by clicking **<Browse>** to go to the location where your message announcement is stored. This file must be a "*.wav"* file. Upload the file to the AastraLink Pro.
6	Specify how you want to be notified when the trigger is activated, as follows: • To be notified on the phone TUI, click in the check box **Send Message to Phone**. • To be notified by email, click in the check box **Send Message to Email**.
7	Click **<Save>** to save your changes.

Configuring Visual Voicemail Settings

Use the following procedure to configure visual voicemail setting parameters.

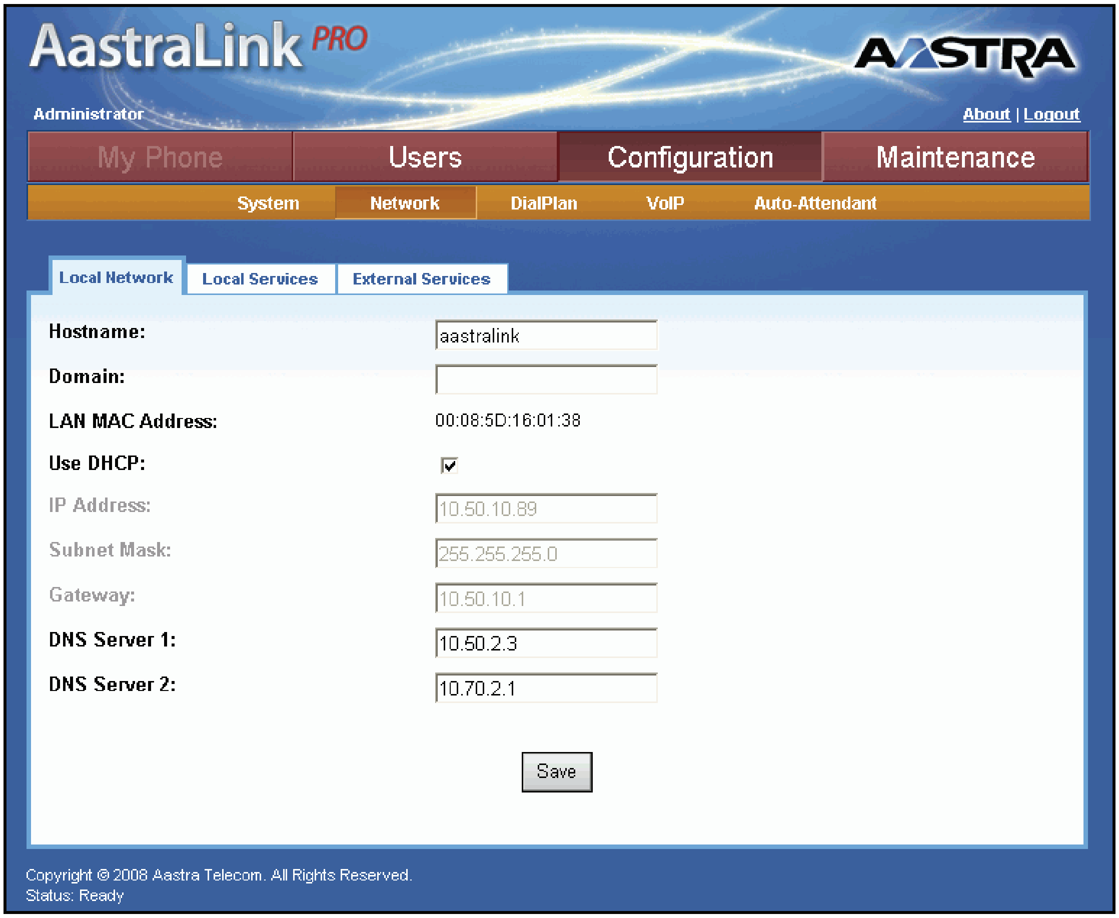
AastraLink Web UI

Step	Action
1	Select **Configuration->Voicemail.**  AastraLink PRO AASTRA Administrator About | Logout My Phone Users Configuration Maintenance System Network DialPlan VoIP Auto-Attendant Regional Settings Set Date/Time Music on Hold Relay/Push Button Voicemail Save Max Duration (sec): 180 Max Messages: 100 Copyright © 2008 Aastra Telecom. All Rights Reserved. Status: Ready
2	To specify a maximum length (duration, in seconds) for a voicemail message, enter a value in the "**Max Duration**" field. The default is 180 seconds maximum length for each voice message, after which the caller is disconnected automatically.
3	To specify a maximum number of voicemail messages saved by any user, enter a value in the "**Max Messages**" field. The default is 100 messages per voice mailbox, after which incoming calls are instructed that the mailbox is full and no message can be left.
4	Click **<Save>** to save your changes.

Note: There is a system-wide limit for voicemail storage on the CompactFlash (CF) card. The limit is calculated by measuring the current free space of the CF card, subtracting 100MB required for working space by system upgrade, logs and backups, and calculating a percentage of the free voicemail capacity compared to the total size for all voicemail currently stored. When this voicemail storage reaches 100%, no new voicemails are recorded until users delete some messages from their mailboxes.

Configuring Network Settings

You configure AastraLink Pro 160 network settings from the **Configuration->Network->Local Network** menu shown below.


AastraLink PRO
AASTRA
Administrator
About | Logout
My Phone
Users
Configuration
Maintenance
System
Network
DialPlan
VoIP
Auto-Attendant
Local Network
Local Services
External Services
Save

Hostname: aastralink
Domain:
LAN MAC Address: 00:08:5D:16:01:38
Use DHCP: ☑
IP Address: 10.50.10.89
Subnet Mask: 255.255.255.0
Gateway: 10.50.10.1
DNS Server 1: 10.50.2.3
DNS Server 2: 10.70.2.1

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Status: Ready

Figure 4-2. Local Network Menu

Editing Local Network Settings

The Local Network parameters you can specify for the AastraLink Pro 160 include:

- **Host Name**

  Name currently assigned to your AastraLink Pro 160 device. You can rename the device during initial installation and setup. Otherwise, the AastraLink Pro 160 retains the default host name of “aastralink.”

  If you add multiple AastraLink Pro 160 devices to your network, they are by default named “aastralink-1, aastralink-2” etc. You should specify a unique host name for your AastraLink Pro 160 in order to make the device easily identifiable on your network.

  The hostname can be up to 10 characters maximum, no spaces or special characters allowed. For example:

  — *Aastra_1* is a valid hostname

  — *Aastra 1* is not valid (spaces are not allowed)

Note: If you change the hostname of your AastraLink Pro 160 device, then you have to reboot the IP phones in order to connect to the new hostname on your network.

- **Domain**

  Domain name assigned to your AastraLink Pro 160.

- **LAN MAC Address**

  MAC address assigned to your AastraLink Pro 160.

- **Use DHCP**

  Enables or disables Dynamic Host Configuration Protocol (DHCP), in order to support dynamic/static addressing. DHCP is enabled on the AastraLink Pro 160 by default.

- **IP Address**

  IP Address assigned to your AastraLink Pro 160.

- **Subnet Mask**

  Subnet Mask assigned to your AastraLink Pro 160.

- **Gateway**

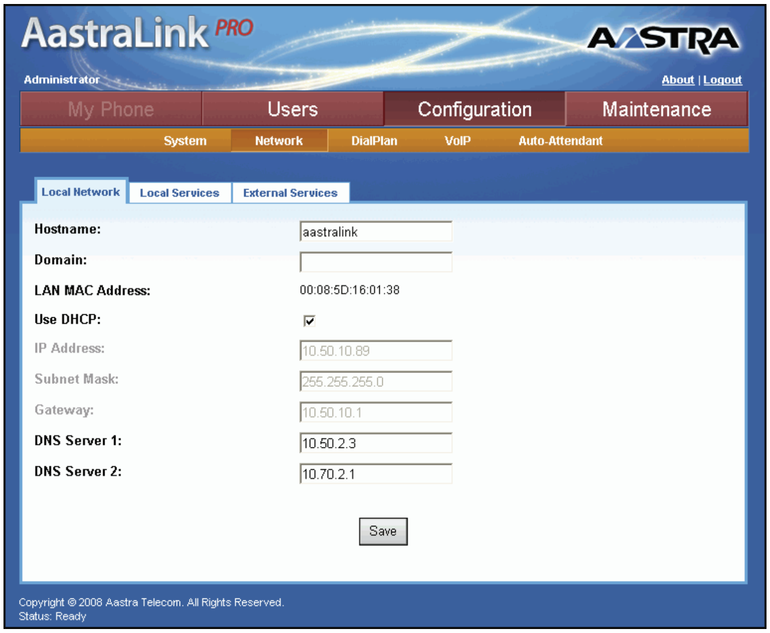
  Default Gateway IP Address assigned to your AastraLink Pro 160.
- **DNS Server 1**

  IP Address of the Domain Name Server (DNS) server 1.
- **DNS Server 2**

  IP Address of DNS server 2.

Use the following procedure to edit local network settings for the AastraLink Pro 160.

AastraLink Web UI

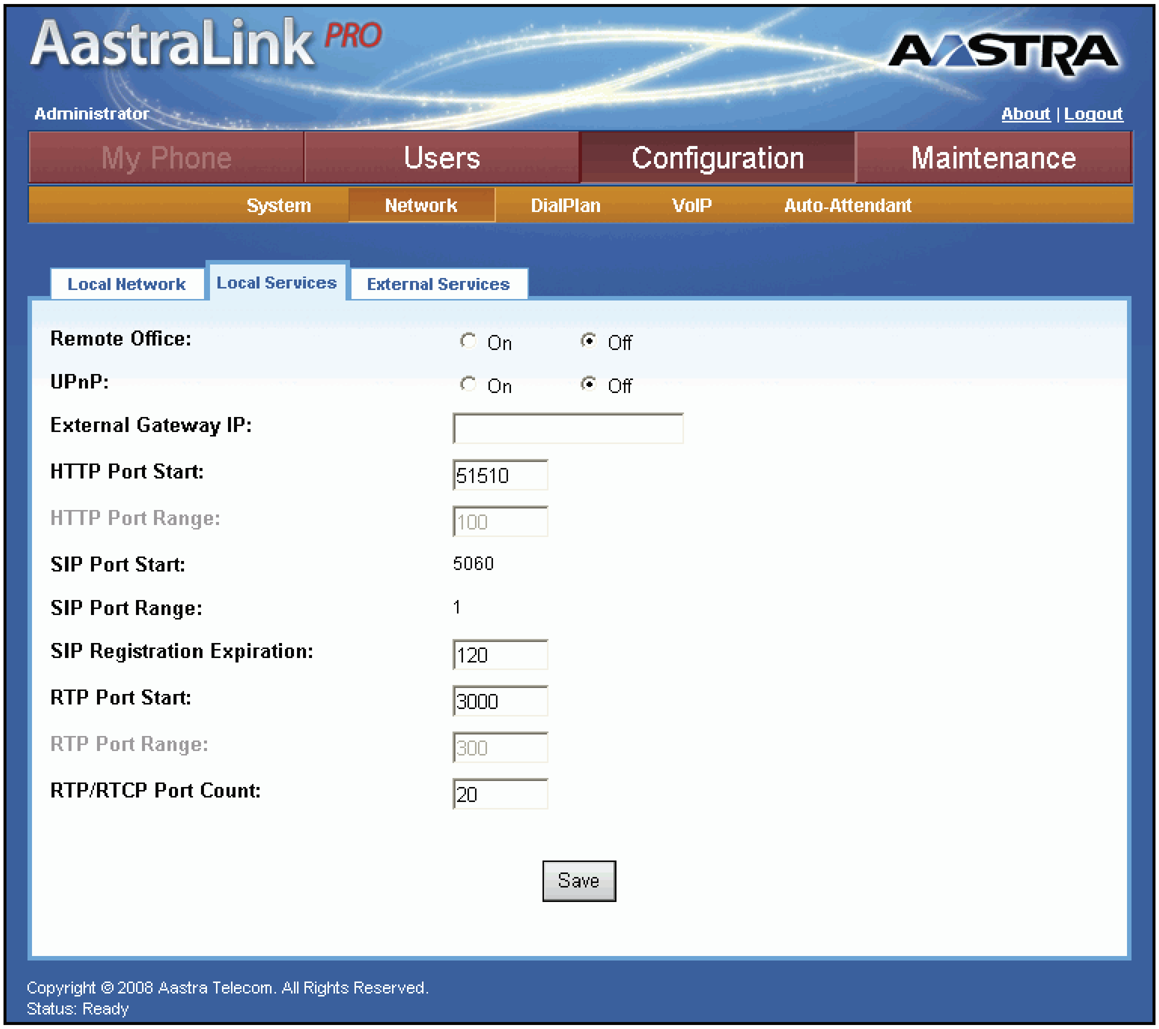
Step	**Action**
1	Select **Configuration->Network->Local Network.**  AastraLink PRO AASTRA Administrator About | Logout My Phone Users Configuration Maintenance System Network DialPlan VoIP Auto-Attendant Local Network Local Services External Services Save Hostname: aastralink Domain: LAN MAC Address: 00:08:5D:16:01:38 Use DHCP: ☑ IP Address: 10.50.10.89 Subnet Mask: 255.255.255.0 Gateway: 10.50.10.1 DNS Server 1: 10.50.2.3 DNS Server 2: 10.70.2.1 Copyright © 2008 Aastra Telecom. All Rights Reserved. Status: Ready
2	To specify a new host name for your AastraLink Pro 160, enter a new name in the **“Host Name”** field. For example: AL_bldg1

AastraLink Web UI

Step	**Action**
3	To specify a Domain name, enter the name in the **“Domain”** field.
4	DHCP is enabled by default. To disable it DHCP, click on “**Use DHCP**” to uncheck the box. **Note:** If you disable DHCP, then you must statically configure the following networking parameters: • **IP Address**: Set to a valid IP address. • **Subnet Mask**: Set to a valid Subnet Mask address. • **Gateway**: Set to a valid Gateway IP address. • **DNS Server 1**: Set to the IP address of DNS server 1. • **DNS Server 2**: Set to the IP address of DNS server 2.
5	Click **<Save>** to save your changes. **Note:** You must reboot your AastraLink Pro 160 in order for these network parameter changes to be implemented.

Editing Local Service Settings

You configure AastraLink Pro 160 local service settings from the **Configuration->Local Services** menu shown below.


AastraLink PRO
AASTRA
Administrator
About | Logout
My Phone
Users
Configuration
Maintenance
System
Network
DialPlan
VoIP
Auto-Attendant
Local Network
Local Services
External Services
Save

Remote Office: ○ On ● Off
UPnP: ○ On ● Off
External Gateway IP:
HTTP Port Start: 51510
HTTP Port Range: 100
SIP Port Start: 5060
SIP Port Range: 1
SIP Registration Expiration: 120
RTP Port Start: 3000
RTP Port Range: 300
RTP/RTCP Port Count: 20

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Status: Ready

Figure 4-3. Local Services Menu

The Local Services parameters you can specify for the AastraLink Pro 160 include:

- **Remote Office**

  Enables/disables remote access support on the AastraLink Pro 160. Default is Off. You only need to enable this field if you deploy and support remote IP phones.

  Enabling this parameter permits Aastra IP phone connections from the HTTP external port of the gateway/router (TCP port 9600).

- **UPnP**

  Enables/disables Universal Plug-n-Play (UPnP) support on the AastraLink. Default is Off. You may need to set this parameter if you are supporting calls beyond your local IP phone network (for example, if you have remote office workers or have enabled SIP trunking) that connect to the AastraLink using a UPnP router.

  Enabling UPnP

  Set UPnP to enable only if *all* of the following conditions are true:

  — The AastraLink is installed behind a UPnP capable router.

  — The UPnP protocol is enabled, and operating correctly, on the router.

  — The router is a model/brand supported by the AastraLink for UPnP.

Note: UPnP support and compatibility varies, depending on the implementation used by the specific router manufacturer. Contact Aastra Telecom for the list of UPnP routers tested with a specific AastraLink software version.

Disabling UPnP

UPnP is set to Disable by default. Accept this default setting if *any* of the following conditions are true:

— The AastraLink is installed behind a router which either does not support UPnP, or has UPnP disabled.

— The AastraLink will not be using external network connections (remote office IP phone users or SIP trunks).

— The AastraLink is installed behind a UPnP enabled router, but for some reason UPnP is not functioning.

  - — The AastraLink is installed behind a UPnP enabled router, but the AastraLink Pro 160 does not currently support the router model.

  When this parameter is set to Disable (the default), in order for the AastraLink to support external calls, you have to:

    - — Manually configure the AastraLink external connection parameters (see page 4-21), and
    - — Manually configure the equivalent port forwarding on the Internet gateway/router so that the AastraLink is reachable from IP phones and SIP trunks outside the LAN.

- **External Gateway IP**

  Specifies the IP Address of the external gateway/router that the AastraLink uses to communicate with the remote IP phones. If you enable UPnP support, then the AastraLink automatically populates this field. If UPnP is not enabled but remote office is enabled, you must manually enter the IP address, FQDN or DNS hostname of the public network.

- **HTTP Port Start**

  Specifies the public network HTTP port on the router that the AastraLink uses to communicate with the remote IP phones. Default is 51510.

  This port must be forwarded to port 9600 on the AastraLink from the public/external side of the Internet gateway/router. Doing so allows remote office IP phone users to connect to the AastraLink device and the local phone network.

  Note that for security reasons, remote IP phone users cannot directly access the AastraLink Web UI using port 9600. Thus, remote IP phone users must use the IP phone UI for all operations.

  If UPnP is enabled, port forwarding is attempted automatically (see the *HTTP Port Range* parameter).

Note: The AastraLink Pro 160 listens for remote office HTTP traffic on port 9600. If you are manually configuring port-forwarding parameters for HTTP, use *HTTP Port Start* as the external port being forwarded to port 9600 on the AastraLink Pro 160.

- **HTTP Port Range**

  Specifies the HTTP port range (offset from the *HTTP Port Start*) used to support remote office IP phone UI and Web UI connections. Default is 100.

  If UPnP is not enabled, then the only HTTP port that must be forwarded from the public/external side of the network to the AastraLink is the single port specified in the *HTTP Port Start* field. (If you disable UPnP, then *HTTP Port Range* is automatically disabled as well.)

- **SIP Port Start**

  Specifies the base port number for SIP connections (default = 5060). This port must be forwarded to the AastraLink from the public/external side of the Internet gateway/router for SIP trunk and remote office calls to succeed. If UPnP is enabled, then port forwarding is attempted automatically.

- **SIP Port Range**

  Specifies the number of ports to attempt SIP connections (default = 1, port 5060 only).

- **RTP Port Start**

  Specifies the public network first RTP port of the range on the router that the AastraLink uses to communicate with IP phones for external SIP calls. Default is 3000. This is the start of the range of UDP ports (from 'RTP Port Start' to 'RTP Port Start + RTP Port Count' that must be forwarded to the AastraLink from the public/external side of the Internet gateway/router for SIP trunk and remote office calls to succeed. If UPnP is enabled, then port forwarding is attempted automatically (see the *RTP Port Range* parameter).

- **RTP Port Range**

  Specifies the RTP port range (offset from the RTP Port Start) used to support the voice path for remote office IP phones and SIP trunk calls. Default is 300.

  UPnP will attempt to allocate and forward the number of external ports specified by *RTP/RTCP Port Count*. Forwarded ports lie within the range: *RTP Port Start* through *(RTP Port Start + RTP Port Range)*.

- **SIP Registration Expiration**

  Specifies the time, in seconds, that the SIP phone and AastraLink SIP trunks use for their SIP registration renewal timer.

  Usually no change is required for this parameter, but some SIP trunk service providers may refuse registration if the period is set shorter than a specified value, for example 3600 seconds. Default is 120.

- **RTP/RTCP Port Count**

  Specifies the total number of media stream ports the AastraLink can support simultaneously for remote phone users.

  Each incoming or outgoing call requires one media stream; each media stream uses one RTP port and one RTCP port. To set this parameter, multiply the maximum numbers of simultaneous calls supported on the AastraLink by two.

  For example, the default setting of 20 allows the AastraLink to support 10 incoming or outgoing calls simultaneously.

Notes:

- Aastra recommends accepting the *RTP/RTCP Port Count* default setting of 20. Increasing the default setting beyond 20 may result in call degradation or service outage.
- When UPnP is enabled, then *RTP/RTCP Port Count* is the maximum number of ports forwarded. Some UPnP router implementations limit the number of ports that may be forwarded. If fewer ports are forwarded, then the number of simultaneous calls supported by the AastraLink is restricted.
- If UPnP is not enabled, then you should manually forward ports: *RTP Port Start* through *(RTP Port Start + RTCP Port Count -1)* from the public/external side of the network to the AastraLink. All ports for RTP must be contiguous.

Configuring Remote Office Support

If you are installing and supporting Aastra IP phones at a remote site - for example, a home office - you need to enable remote office support on the AastraLink Pro 160.

Note the following information about configuring remote office support:

- The procedure for configuring remote office support varies slightly, depending on whether or not you installed your AastraLink Pro 160 behind a UPnP enabled/supported router. Refer to the *UPnP* parameter description on page 4-20 before you begin the procedure described in this section.
- You must initially configure phones intended for remote locations at the central office before deployment.

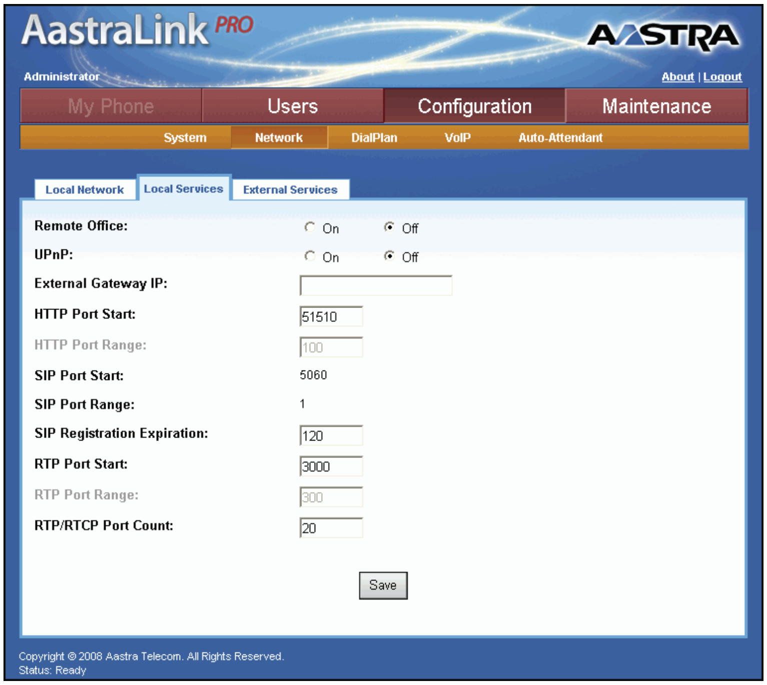
For complete instructions on configuring your Aastra IP phones for remote deployment, see the following in this guide:

— Appendix A, “Remote Office Configuration of the IP Phone (Phone-Side)”

— Appendix B, “Remote Office Configuration of the AastraLink Pro 160 (Server-Side)”

Use the following procedure to configure AastraLink remote office support.

AastraLink Web UI

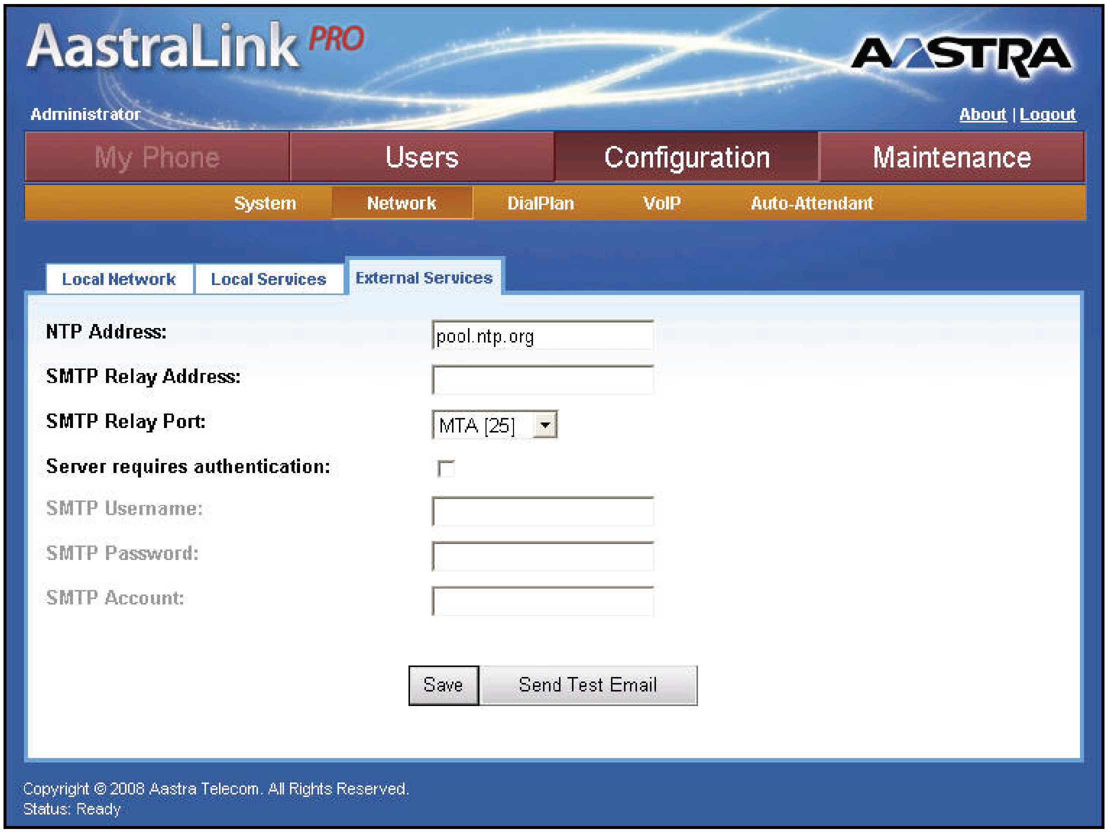
Step	**Action**
1	Select **Configuration->Network->Local Services.**  AastraLink PRO AASTRA Administrator About | Logout My Phone Users Configuration Maintenance System Network DialPlan VoIP Auto-Attendant Local Network Local Services External Services Save Copyright © 2008 Aastra Telecom. All Rights Reserved. Status: Ready Remote Office: ○ On ● Off UPnP: ○ On ● Off External Gateway IP: HTTP Port Start: 51510 HTTP Port Range: 100 SIP Port Start: 5060 SIP Port Range: 1 SIP Registration Expiration: 120 RTP Port Start: 3000 RTP Port Range: 300 RTP/RTCP Port Count: 20
2	The “Remote Office” field is disabled by default. To enable remote office support, set Remote Office to **On.**
3	The “UPnP” field is disabled by default. Set UPnP to **<Off>** or **<On>**, as required by your specific network configuration. See the UPnP parameter description on page page 4-20 for more information.

AastraLink Web UI

Step	Action
4	Depending on whether or not you enabled UPnP, specify any other required Local Services parameters, as described on page 4-21. Default values for each field are as follows: • **External Gateway IP** **<blank>** • **HTTP Port Start** **51510** • **HTTP Port Range** **100** • **SIP Registration Expiration** **120 seconds** • **RTP Port Start** **3000** • **RTP Port Range** **300** • **RTP/RTCP Port Count** **20**
5	Click on **<Save>** to save your changes.

Editing External Services Settings

Depending on your network requirements, administrators can configure external services for the AastraLink Pro 160.


AastraLink PRO
AASTRA
Administrator
About | Logout
My Phone
Users
Configuration
Maintenance
System
Network
DialPlan
VoIP
Auto-Attendant
Local Network
Local Services
External Services
Save
Send Test Email

NTP Address: pool.ntp.org

SMTP Relay Address:

SMTP Relay Port: MTA [25]

Server requires authentication: ☐

SMTP Username:

SMTP Password:

SMTP Account:

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Status: Ready

The External services parameters you can specify for the AastraLink Pro 160 include:

- **NTP Address**

  The Network Time Protocol (NTP) pool is a collection of networked time servers that provide the accurate time to other computers on IP networks. By default, this parameter is set to **pool.ntp.org**.

- **SMTP Relay Address**

  Simple Mail Transfer Protocol (SMTP) is the standard used for email transmissions across IP networks. The AastraLink Pro 160 is capable of acting as its own Mail Transfer Agent (MTA) for SMTP email. By default, the AastraLink attempts to perform DNS lookups and resolve the destination email server for direct delivery to the end user.

  To disable DNS lookup and direct delivery of email, and use an external SMTP relay instead, specify the IP address or fully qualified domain name (FQDN) of the relay in the SMTP Relay Address field. For example, the SMTP relay server may be a Microsoft Exchange server on your LAN, or a server that your ISP provides.

Note: The SMTP Relay Address configures the internal LAN or external WAN address of the SMTP relay server. The SMTP relay server must be correctly configured to permit incoming email traffic from the AastraLink Pro 160 to be forwarded through the relay to the end users.

- **SMTP Relay Port**

  The SMTP Relay Port is the port that handles SMTP traffic to/from the relay server. Valid ports you can select from are:

  - Mail Transfer Agent (MTA), port 25 for RFC 2822 authentication (default)
  - Mail User Agent (MTU), port 587 for RFC 2476 message submission

- **Server requires authentication**

  If your network server requires authentication for SMTP, you can enable this feature using the "**Server requires authentication**" parameter. Enabling this parameter requires that you also specify an SMTP Username, Password and Account for the server.

  If server authentication is disabled, the AastraLink uses the value specified for the **Domain** parameter at the location *Configuration->Network->Local Network*. If no value is specified for the Domain parameter, the AastraLink Pro uses the default value in the format aastralink@ hostname.

- **SMTP Username**

  (If server authentication enabled) The SMTP Username specifies the username for SMTP account authentication.

- **SMTP Password**

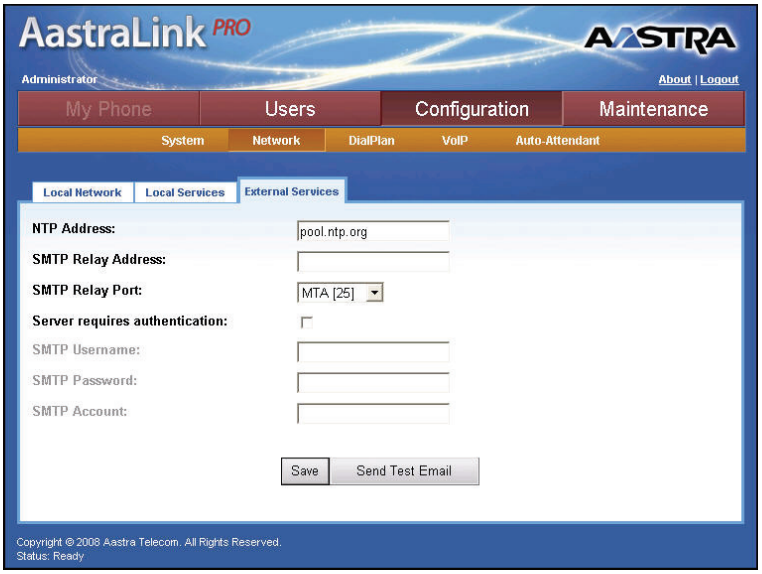
  (If server authentication enabled) The SMTP Password specifies the password for SMTP account authentication.

- **SMTP Account**

  (If server authentication enabled) The SMTP Account specifies the **FROM:** email address used for sending SMTP email. For example, myaccount@myisp.com.

Use the following procedure to configure External services.

AastraLink Web UI

Step	Action
1	Select **Users->Network->External Services.**  AastraLink PRO AASTRA Administrator About | Logout My Phone Users Configuration Maintenance System Network DialPlan VoIP Auto-Attendant Local Network Local Services External Services Save Send Test Email Copyright © 2008 Aastra Telecom. All Rights Reserved. Status: Ready NTP Address: pool.ntp.org SMTP Relay Address: SMTP Relay Port: MTA [25] Server requires authentication: ☐ SMTP Username: SMTP Password: SMTP Account:
2	Specify a Network Time Protocol (NTP) Address in the **“NTP Address”** field. For example: pool.ntp.org
3	To use an external SMTP relay server, specify the IP address or FQDN of the relay in the **“SMTP Relay Address”** field. For example: 192.32.12.123

AastraLink Web UI

Step	Action
4	Select the SMTP relay port that handles SMTP traffic on the SMTP server, in the **“SMTP Relay Port”** field. Valid values are: • **MTA** (port 25) (default) • **MUA** (port 587)
Server Authentication Requirement	
5	If your network server requires authentication, enable the field “**Server requires authentication**” by checking the box. Disable this feature by unchecking the box.
6	If “Server requires authentication” is enabled, enter an SMTP username in the “**SMTP Username**” field. This username must appear in the SMTP message received by the server.
7	If “Server requires authentication” is enabled, enter an SMTP password in the “**SMTP Password**” field. This password must appear in the SMTP message received by the server.
8	If “Server requires authentication” is enabled, enter an SMTP account in the “**SMTP Account**” field. For example: myaccount@myisp.com This account must appear in the SMTP message received by the server.
9	Click **<Save>** to save your changes.

Send Test Email

After you configure and save the SMTP settings at the location, *Configuration->Network->External Services*, you can test the settings to make sure they work correctly by clicking the **<Send Test Email>** button.

Clicking the **<Send Test Email>** automatically sends an email to the administrator’s email address configured at the location, *My Phone->Preferences->My Profile*. An example of a received SMTP test email is as follows:

```
Email sent at:  12:06:17 PM 24-04-2008
```

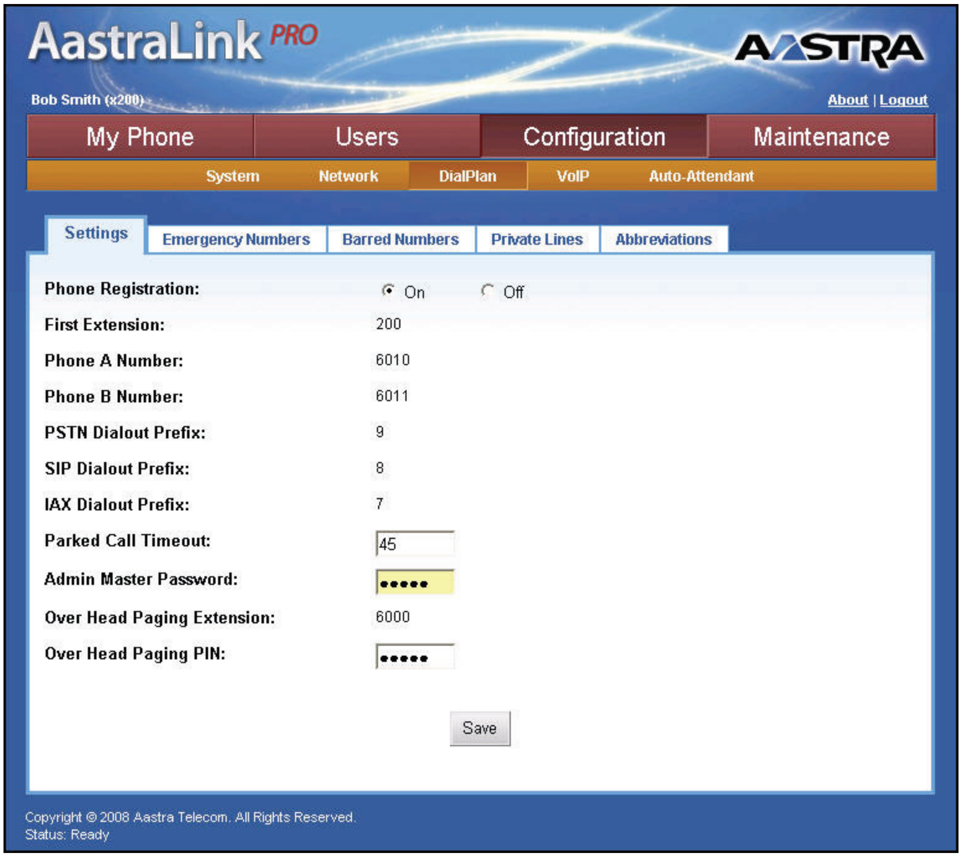
Receiving the email verifies that the SMTP settings are correct. If you do not receive the email, go back to *Configuration->Network->External Services*, and edit the values for the SMTP fields as required.

Configuring Dial Plan Settings

You configure AastraLink Pro 160 dial plan settings from the **Configuration->DialPlan** menu shown below

A dial plan describes the number and pattern of digits that a user dials to reach a particular telephone number. The default dialing plan for the AastraLink Pro 160 is 3-digits, starting with extension 200 (administrator). Users are assigned extensions 201, 202, etc.

Note: The Administrator can select an alternative 3-digit or 4-digit dialplan and first extension when initially configuring the system from the administrator phone TUI. This cannot be changed after the user phones have been added; a factory-default of the system greenfield is required to change the dialplan.


AastraLink PRO
AASTRA
Bob Smith (x200)
About | Logout
My Phone
Users
Configuration
Maintenance
System
Network
DialPlan
VoIP
Auto-Attendant
Settings
Emergency Numbers
Barred Numbers
Private Lines
Abbreviations
Save
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Status: Ready

Phone Registration:	● On ○ Off
First Extension:	200
Phone A Number:	6010
Phone B Number:	6011
PSTN Dialout Prefix:	9
SIP Dialout Prefix:	8
IAX Dialout Prefix:	7
Parked Call Timeout:	45
Admin Master Password:	•••••
Over Head Paging Extension:	6000
Over Head Paging PIN:	•••••

Figure 4-4. Dial Plan Menu

Local Dial Plan

Table 4-1 describes the AastraLink Pro 160 Dialplan Numbers and Directory Numbers.

Table 4-1. AastraLink Pro 160 Dialplan

DialPlan Numbers	Directory Numbers
0	0 Operator
1 Abbreviated Dialing	00 through 99
2* Extn	2xx/2xxx SIP Extension
3* Extn	3xx/3xxx SIP Extension
4* Extn	4xx/4xxx SIP Extension
5 Unused	
6 Feature Access	
0 Local Features	
00 Paging	6000 Overhead paging
01 Relay	6001 Activate Relay
02...09 Unused	
10 FXS A	6010 FAX/Phone A
11 FXS B	6011 FAX/Phone B
12 AutoFAX	6012 FAX A/B Auto selection
20...99 Unused	
1 Local CallP Features	
00 IVR	6100 Auto-attendant IVR
01 Vmail	6101 Voicemail
02...99 Unused	
2 Reserved	
3 Reserved	
4 Reserved	
5 Call/User Groups	65xx User Group xx
6 Reserved	
7 Call parking	67xx Park Call xx
8 Unused	
9 Unused	
7* AastraLink Trunk	7+ (access digit) + xxx/xxxx *access digit = 0 - 9 (assigned by the administrator) * xxx/xxxx = 3 or 4 digit extn
8* SIP Trunk	8 + (access digit*) + external number *access digit = 0 - 9 (assigned by the administrator)
9* PSTN (FXO Access)	9 external - PSTN line call

Star Codes

Table 4-2 describes the AastraLink Pro 160 star codes implemented.

Table 4-2. AastraLink Pro 160 Star-Codes

Star Code	Description
*5XXX	Intercom to extension XXX
*60	Public Address/Overhead paging
*66	Voicemail
*76XXX	Directed Call Pickup of extension XXX
*78	Do Not Disturb

Specifying Dial Plan Settings

Use the following procedure to specify dial plan settings for the AastraLink Pro 160.

AastraLink Web UI

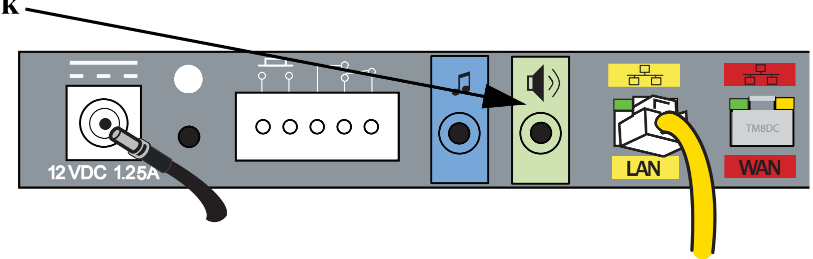
Step	Action
1	Select **Configuration->Dial Plan->Settings.**
2	Set the **“Phone Registration”** field to one of the following options: **On** - (default) Allows new IP phones to register with the AastraLink Pro 160. **Off** - Prevents new phones from registering with the AastraLink Pro 160.

AastraLink Web UI

Step	Action
3	After a caller parks a call, the extension of the caller who parked the call will ring again to remind them that they put a call on park. In the “**Parked Call Timeout”** field, enter the time, in seconds, that the AastraLink Pro 160 waits before it rings back to remind the IP Phone user that he parked a call. This parameter is a global setting for all calls that are parked (not a per-call basis). Valid values are **1 to 3600 (1 hour)**. Default is **45**. **Note:** A value of 0 for this parameter sets the Parked Call Timeout to 45 seconds (default).
4	To change the password for the administrator’s phone, specify a new password in the **“Phone’s Admin Password”** field. **Warning**: Changing the phones administrator password may result in all phones rebooting to accept the changed password.
5	See the section, “Configuring Overhead Paging” on page 4-35 to set the Overhead Paging PIN parameter.
6	Click **<Save>** to save your changes.

Configuring Overhead Paging

The AastraLink Pro 160 has an overhead paging jack (located on the back of the device) that you can directly connect to an amplifier in order to support overhead paging.



Overhead Paging Jack (Green Port)

Back of AastraLink Pro 160

To access the pager, an IP phone user goes through the Auto-Attendant, and specifies the correct password, as described in the following procedure.

AastraLink Web UI

Step	Action
1	Select **Configuration->Dial Plan.**
2	Specify the password (PIN) IP phone users enter to access overhead paging in the **“Overhead Paging PIN”** field. For example, enter: 6000 **Note:** Default overhead paging PIN is **22222**.
3	Click **<Save>** to save your changes.

Configuring an Emergency Dial Plan

Public telephone networks in countries around the world have a single emergency telephone number (emergency services number), that allows a caller to contact local emergency services for assistance when required. The emergency telephone number may differ from country to country. It is typically a three-digit number so that it can be easily remembered and dialed quickly. Some countries have a different emergency number for each of the different emergency services, or may have additional numbers for contacting regional / locality specific emergency services.

You can specify the digits to dial on the IP phone for contacting emergency services. Once you specify the emergency number(s) on the phone, you can dial those numbers directly on the dial pad when required, and the phone automatically dials to those emergency services without needing to enter the PSTN (FXO) prefix digit 9.

Emergency Number	Description
911	An emergency number for the United States and Canada
080	An emergency number for Mexico

These emergency numbers are also used when checking that an emergency call is not in progress for the FXO priority override feature described in the Chapter 1, the section, "Emergency Call Priority" on page 1-9.

By default, the emergency number 911 is configured for the AastraLink device.

Use the following procedure to configure other emergency numbers for your network.

AastraLink Web UI

Step	**Action**
1	Select **Configuration->Dial Plan->Emergency Numbers.**
2	To add a new emergency number, click **<Add Emergency Number>.**
3	Specify a phone number, then click **<Add >**. The Emergency Numbers list updates to display the number you specified. **Note:** To delete an emergency number, select the number(s) you want to delete, then click **<Delete Selected Emergency Numbers>.**

Configuring Barred Numbers

Barred numbers are blocked PSTN numbers that cannot be dialed from the AastraLink Pro 160. You can use the Web UI to specify a barred numbers list for the IP phones on your network. The barred numbers list applies to outgoing calls only.

To bar a specific number, simply add the number to the barred numbers list. To bar a specific number pattern, you use the following format:

<barred number>*

For example, to block 800-number calls, you add **800*** to the barred numbers list. The AastraLink automatically adds the PSTN and SIP prefixes as required.

Note: When barring PSTN numbers, do not bar the "9" range numbers, or calls to 911 and 9911. These numbers must not be blocked.

Adding a Barred Number

Use the following procedure to specify a barred number for the AastraLink Pro 160.

AastraLink Web UI

Step	Action
1	Select **Configuration->Dial Plan->Barred Numbers.**
2	Click **<Add Barred Number>**
3	Specify a phone number, or pattern of numbers, to add to Barred Numbers list, then click **<Add>** The Barred Numbers list updates to display the number you specified.

Deleting a Barred Number

Use the following procedure to delete a barred number from the AastraLink Pro 160 barred number list.

AastraLink Web UI

Step	Action
1	Select **Configuration->Dial Plan->Barred Numbers**
2	Click on the check-box next to the number you want to delete.
3	Click **<Delete Selected Barred Numbers>**

Configuring Private Lines

Private lines are lines reserved for a designated, VIP user (for example, the CEO or local manager). You configure a private line to ensure that the user always has a direct line available.

You can configure up to five incoming private lines and five outgoing private lines on the AastraLink Pro 160.

Note: When you configure a private line, the FXO line is reserved only for the incoming call direction. The line is still shared by all users for outgoing calls.

Configuring Incoming Private Lines

Use the following procedure to configure an incoming private line.

AastraLink Web UI

Step	Action
1	Select **Configuration->Dial Plan->Private Lines**
2	For the line that you want to configure as private, select an extension where incoming calls on this line will be forwarded. For example: Line 1: 220 (John Smith) If you set this parameter to **None**, then all incoming calls are forwarded to the Auto-Attendant or Operator.
3	Click **<Save>** to save your changes.

Configuring Outgoing Private Lines

Use the following procedure to configure an outgoing private line.

AastraLink Web UI

Step	Action
1	Select **Users->User List**
2	Click on the extension for which you want to assign a private outgoing line. For example: Ext 201
3	Set the **Outgoing Line** parameter to the line number **(Line 1 - Line 6)** that you prefer for outgoing calls placed by this extension. **Note:** Setting an Outgoing Line does not guarantee that a call goes out over the line. Instead, at the time the call is placed, that line is the first to be attempted. If the line is busy or has no connection, the call is placed on another outgoing line (and perhaps even a SIP trunk failover).
4	Click **<Save>** to save your changes.

Configuring Abbreviations

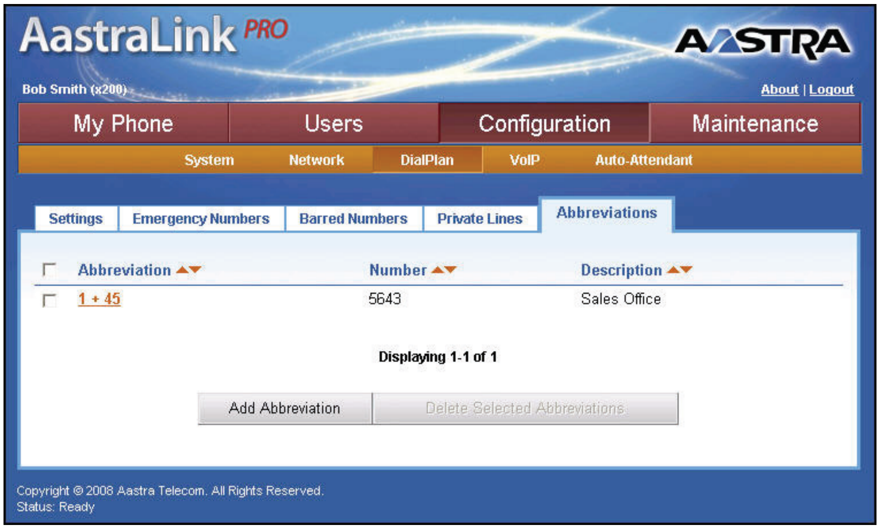
The AastraLink Pro 160 allows you to define a list of abbreviated numbers to be used as a shortcut when dialing from a phone connected to the AastraLink Pro. These are numbers that are frequently used for system-wide shortcuts.

For each abbreviation that is configured, when the abbreviation is dialed from IVR menu or IP phone, the AastraLink places the outgoing call using the full specified number instead. This provides an effective system-wide speed dial or shortcut dialling method, and allows for exceptions to other features such as barred numbers to be provisioned.

The AastraLink automatically dedicates the prefix ’1’ for abbreviated numbers in the dialing plan. The abbreviated number that you set must be two digits and is limited to 100 numbers (00 to 99). This abbreviated number is a virtual extension, which is entirely separate from the extension number of the users IP phone. For more information about creating virtual extensions, see Chapter 3, the section, “Virtual Extension Numbers” on page 3-16.

The Administrator can create, edit, and/or delete abbreviated numbers.

Note: On the global dial plan, abbreviated numbers are reserved as primary digit 1.


AastraLink PRO
AASTRA
Bob Smith (x200)
About | Logout
My Phone
Users
Configuration
Maintenance
System
Network
DialPlan
VoIP
Auto-Attendant
Settings
Emergency Numbers
Barred Numbers
Private Lines
Abbreviations
Add Abbreviation
Delete Selected Abbreviations

☐	Abbreviation	Number	Description
☐	1 + 45	5643	Sales Office

Displaying 1-1 of 1

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Status: Ready

Figure 4-5. Abbreviations Menu

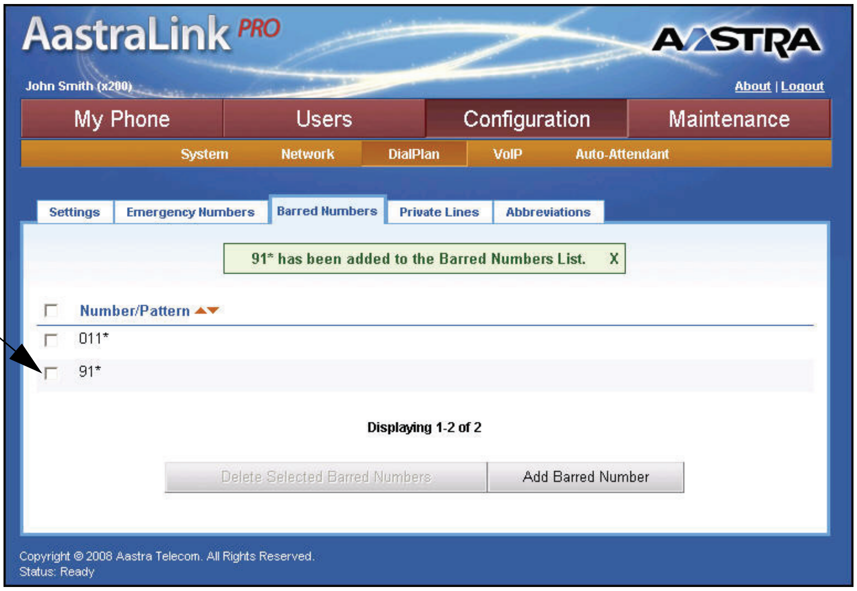
In the illustration above, 145 is the abbreviated number that the phones use as a shortcut for dialing the longer User Group virtual extension associated with the sales office.

Examples of Abbreviated Number Configurations

The following examples illustrate the configuration of abbreviated numbers.

Example 1

The first illustration below shows call barring as 91* so that external long distance is blocked. The second illustration shows an abbreviation of 1+20 added which routes to phone number 918007499262, so that users can still dial out for pizza.


AastraLink PRO
AASTRA
John Smith (x200)
About | Logout
My Phone
Users
Configuration
Maintenance
System
Network
DialPlan
VoIP
Auto-Attendant
Settings
Emergency Numbers
Barred Numbers
Private Lines
Abbreviations
X
Delete Selected Barred Numbers
Add Barred Number

91* has been added to the Barred Numbers List.

☐	Number/Pattern ▲▼
☐	011*
☐	91*

Displaying 1-2 of 2

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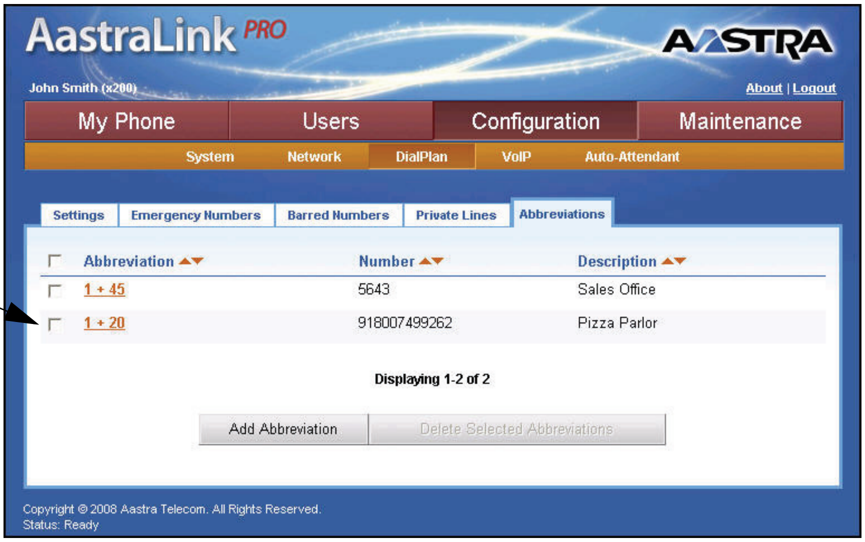
Status: Ready

Call Barring Number of 91*


AastraLink PRO
AASTRA
John Smith (x200)
About | Logout
My Phone
Users
Configuration
Maintenance
System
Network
DialPlan
VoIP
Auto-Attendant
Settings
Emergency Numbers
Barred Numbers
Private Lines
Abbreviations
Add Abbreviation
Delete Selected Abbreviations

☐	Abbreviation ▲▼	Number ▲▼	Description ▲▼
☐	1 + 45	5643	Sales Office
☐	1 + 20	918007499262	Pizza Parlor

Displaying 1-2 of 2

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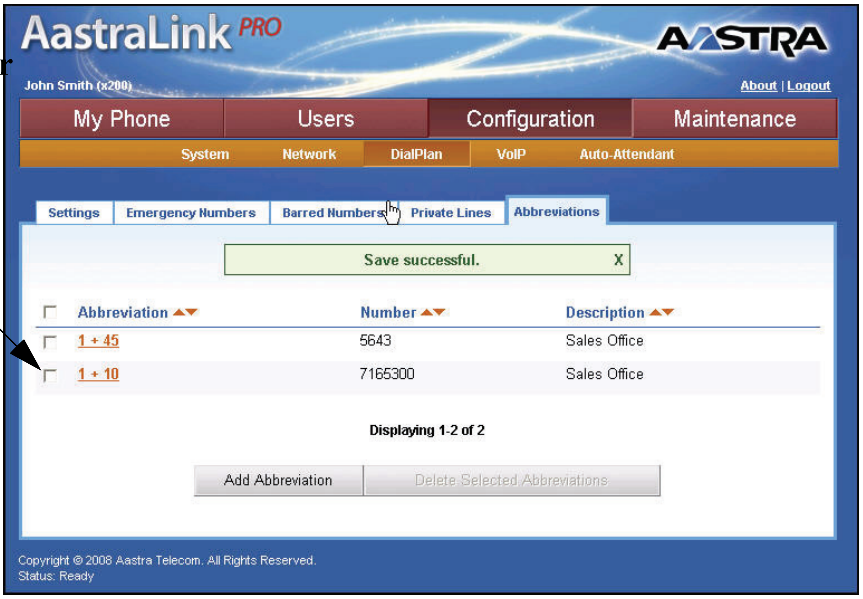
Status: Ready

Abbreviated Number of 1+20 for Pizza Parlor

Example 2

The first illustration shows an abbreviation of 1+10 added, which routes to phone number 7165300. This is an inter-office AastraLink trunk call to call group 300 using AastraLink trunk number 1. This is accessing the Sales team using an AastraLink at another location.

Abbreviated Number of 1+10 for Sales Office


AastraLink PRO
AASTRA
John Smith (x200)
About | Logout
My Phone
Users
Configuration
Maintenance
System
Network
DialPlan
VoIP
Auto-Attendant
Settings
Emergency Numbers
Barred Numbers
Private Lines
Abbreviations
Add Abbreviation
Delete Selected Abbreviations

Save successful. X

☐	Abbreviation	Number	Description
☐	1 + 45	5643	Sales Office
☐	1 + 10	7165300	Sales Office

Displaying 1-2 of 2

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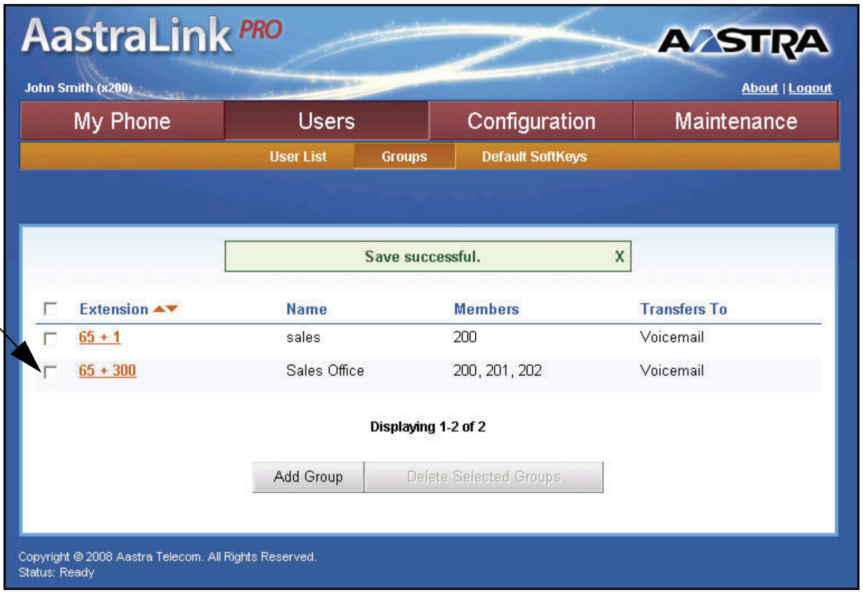
Status: Ready

User Group of 65 + 300


AastraLink PRO
AASTRA
John Smith (x200)
About | Logout
My Phone
Users
Configuration
Maintenance
User List
Groups
Default SoftKeys
Add Group
Delete Selected Groups

Save successful. X

☐	Extension	Name	Members	Transfers To
☐	65 + 1	sales	200	Voicemail
☐	65 + 300	Sales Office	200, 201, 202	Voicemail

Displaying 1-2 of 2

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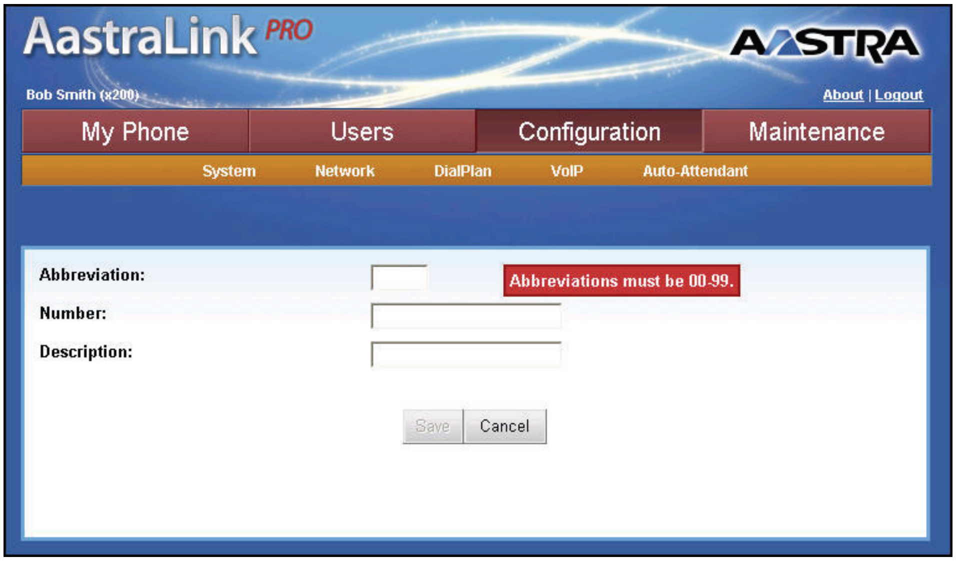
Status: Ready

Configuring Abbreviated Numbers

Use the following procedure to configure an abbreviated number.

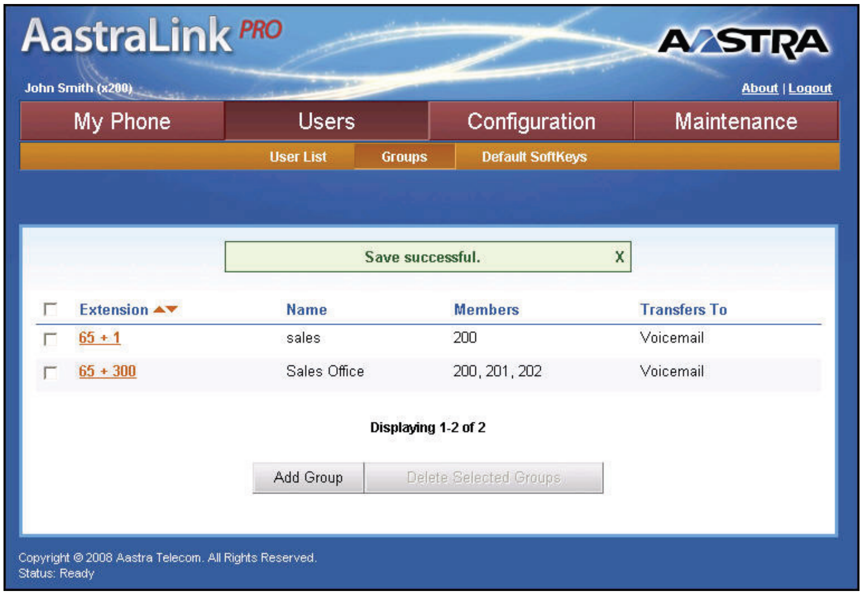
AastraLink Web UI

Step	Action
1	Select **Configuration->Dial Plan->Abbreviations.**
2	Click **<Add Abbreviation>.**  AastraLink PRO AASTRA Bob Smith (x200) About | Logout My Phone Users Configuration Maintenance System Network DialPlan VoIP Auto-Attendant Abbreviation: Abbreviations must be 00-99. Number: Description: Save Cancel
3	In the **Abbreviation** field, specify a two-digit number that the AastraLink dials as a shortcut prior to a user dialing an outgoing number. Valid values must be between 00 and 99. **Note:** The AastraLink automatically prepends "**1**" to the abbreviated number you specify.
4	In the **Number** field, specify an extension or an outside phone number (up to 20 digits) for the AastraLink to dial when using the specified abbreviated number.
5	(Optional) In the **Description** field, specify a description that identifies this abbreviated number.
6	Click **<Save>** to save your changes.

Editing Abbreviated Numbers

Use the following procedure to edit an abbreviated number.

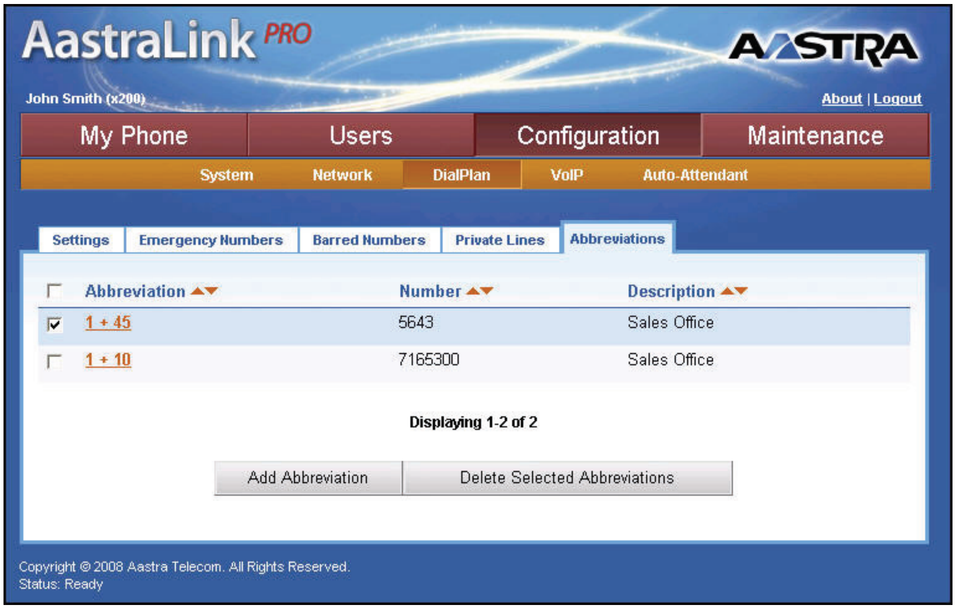
AastraLink Web UI

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>1</td><td>Select Configuration->Dial Plan->Abbreviations.

AastraLink PRO
AASTRA
John Smith (x200)
About | Logout
My Phone
Users
Configuration
Maintenance
User List
Groups
Default SoftKeys
X
Add Group
Delete Selected Groups
Save successful.
<table>
<tr><th>☐</th><th>Extension</th><th>Name</th><th>Members</th><th>Transfers To</th></tr>
<tr><td>☐</td><td>65 + 1</td><td>sales</td><td>200</td><td>Voicemail</td></tr>
<tr><td>☐</td><td>65 + 300</td><td>Sales Office</td><td>200, 201, 202</td><td>Voicemail</td></tr>
</table>
Displaying 1-2 of 2
Copyright © 2008 Aastra Telecom. All Rights Reserved.
Status: Ready</td></tr>
<tr><td>2</td><td>In the Abbreviation column, click on the abbreviated number you want to edit.</td></tr>
<tr><td>3</td><td>Edit the Abbreviation, Number, and Description as required.</td></tr>
<tr><td>4</td><td>Click <Save> to save your changes.</td></tr>
</table>

Deleting Abbreviated Numbers

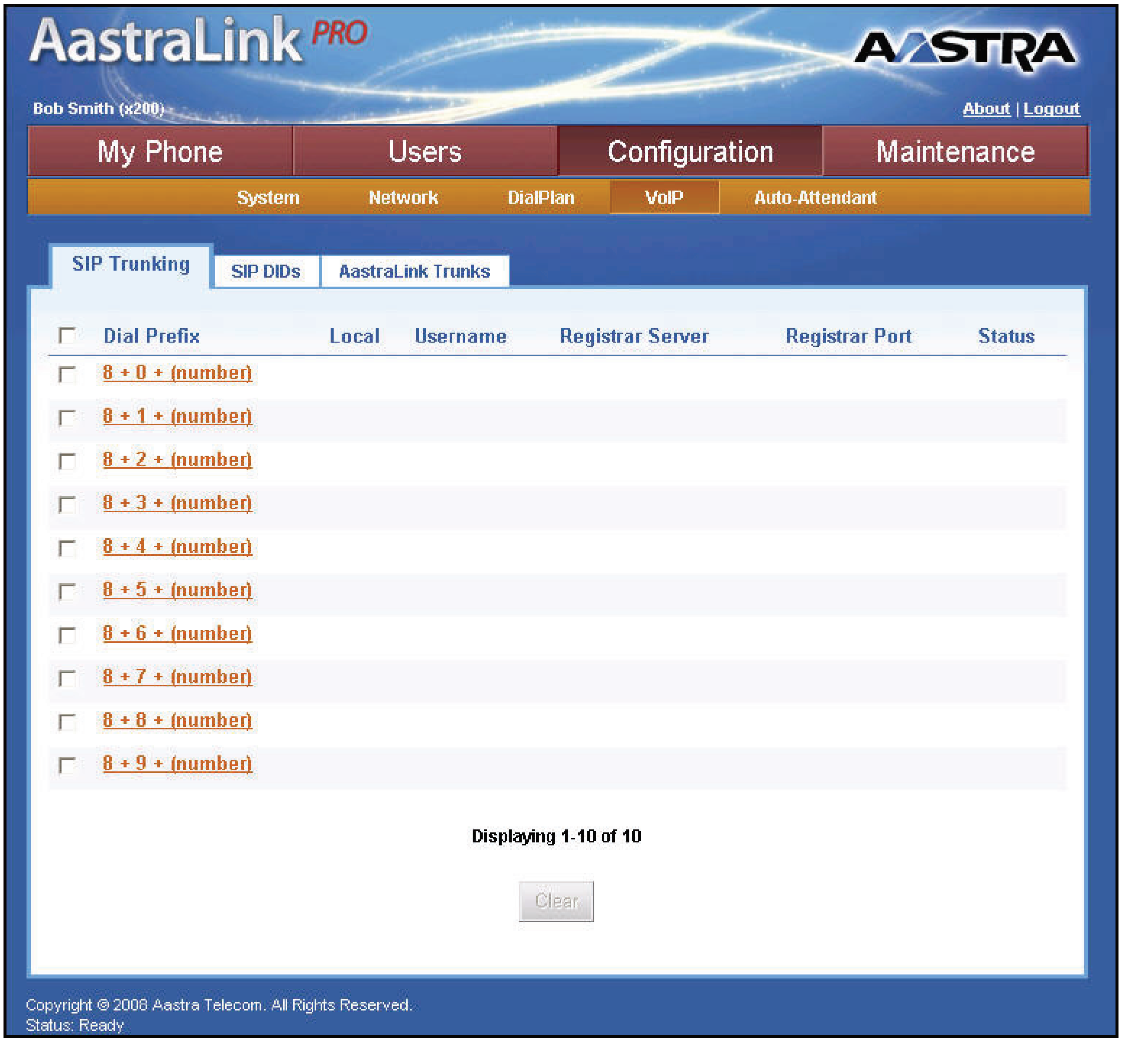
Use the following procedure to delete an abbreviated number.

AastraLink Web UI

Step	Action
1	Select **Configuration->Dial Plan->Abbreviations.**  AastraLink PRO AASTRA About | Logout My Phone Users Configuration Maintenance System Network DialPlan VoIP Auto-Attendant Settings Emergency Numbers Barred Numbers Private Lines Abbreviations Add Abbreviation Delete Selected Abbreviations John Smith (x200) ☐ Abbreviation · Number · Description ☑ 1 + 45 · 5643 · Sales Office ☐ 1 + 10 · 7165300 · Sales Office Displaying 1-2 of 2 Copyright © 2008 Aastra Telecom. All Rights Reserved. Status: Ready
2	In the **Abbreviation** column, place a check mark in the box for the abbreviated number you want to delete.
3	Click **<Delete Selected Abbreviations>** button. The following prompt displays: "*Are you sure you want to delete the selected item?*"
4	Click **<Yes>** to delete the abbreviated number, and the associated phone number and description.

Configuring VoIP Settings

You configure AastraLink Pro 160 Voice over IP (VoIP) settings from the **Configuration->VoIP** menu shown below.


AastraLink PRO
AASTRA
Bob Smith (x200)
About | Logout
My Phone
Users
Configuration
Maintenance
System
Network
DialPlan
VoIP
Auto-Attendant
SIP Trunking
SIP DIDs
AastraLink Trunks

☐	Dial Prefix	Local	Username	Registrar Server	Registrar Port	Status
☐	8 + 0 + (number)					
☐	8 + 1 + (number)					
☐	8 + 2 + (number)					
☐	8 + 3 + (number)					
☐	8 + 4 + (number)					
☐	8 + 5 + (number)					
☐	8 + 6 + (number)					
☐	8 + 7 + (number)					
☐	8 + 8 + (number)					
☐	8 + 9 + (number)					

Displaying 1-10 of 10

Clear

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Status: Ready

Figure 4-6. Voice-Over-IP Menu

From the VoIP menu, you can configure:

- "SIP Trunking" on page 4-48
- "SIP Direct Inward Dialing (DID)" on page 4-55
- "AastraLink Trunking" on page 4-58

The following paragraphs describe each of these types of VoIP configurations.

SIP Trunking

You enable SIP trunking on the AastraLink Pro 160 in order to support internetworking between your Aastra IP phones, and the SIP devices on a VoIP service provider network. On the AastraLink Pro, you can configure up to 10 SIP trunks for your network. See Figure 4-6.

Note: When you enable SIP trunking, note the following important information:

- You can configure up to 10 SIP trunks between your AastraLink Pro 160 IP phone network and a service provider network.
- Depending on whether or not you enable UPnP support on your AastraLink device (that is, whether or not your AastraLink is installed behind a UPnP enabled router), you may need to manually specify the router RTP port start/range used for external SIP calls, and forward this port range and the SIP port (5060) from the public/external Internet gateway/router to the AastraLink local IP address. Refer to "Editing Local Service Settings" on page 4-19 for more information.

Incoming SIP trunk calls

Call routing

The AastraLink Pro 160 automatically routes incoming SIP calls using the **TO:** address in the header of the SIP message. If the address matches a Direct Inward Dialing (DID) rule and results in a valid SIP extension, the call is routed directly to that extension. If no match is found, the call is sent to the current incoming call destination (for example, open or closed hours routing to auto-attendant, operator, or user group).

Calling party identification

The AastraLink Pro 160 SIP phones automatically display the calling party name and number (CLID) when an incoming SIP call is received on a registered trunk, using the **FROM:** address received in the header of the SIP message. The CLID is also stored in the call detail records (CDR logs).

Outgoing SIP trunk calls

Call routing

The AastraLink Pro 160 default prefix for outbound SIP trunk calls is set to 8. When Aastralink Pro users make a call, they dial the following:

(prefix digit) + (access digit) + (directory number)

Where:

prefix digit = 8
SIP trunk access digit = 0 - 9
directory number

For example, the number **82**9785551212 routes the outbound call over SIP trunk #2 to directory number **9785551212.**

The AastraLink Pro 160 routes any calls with a matching SIP-trunk prefix and trunk-accessor digit, to the appropriate SIP trunk. You can provision up to 10 SIP trunks.

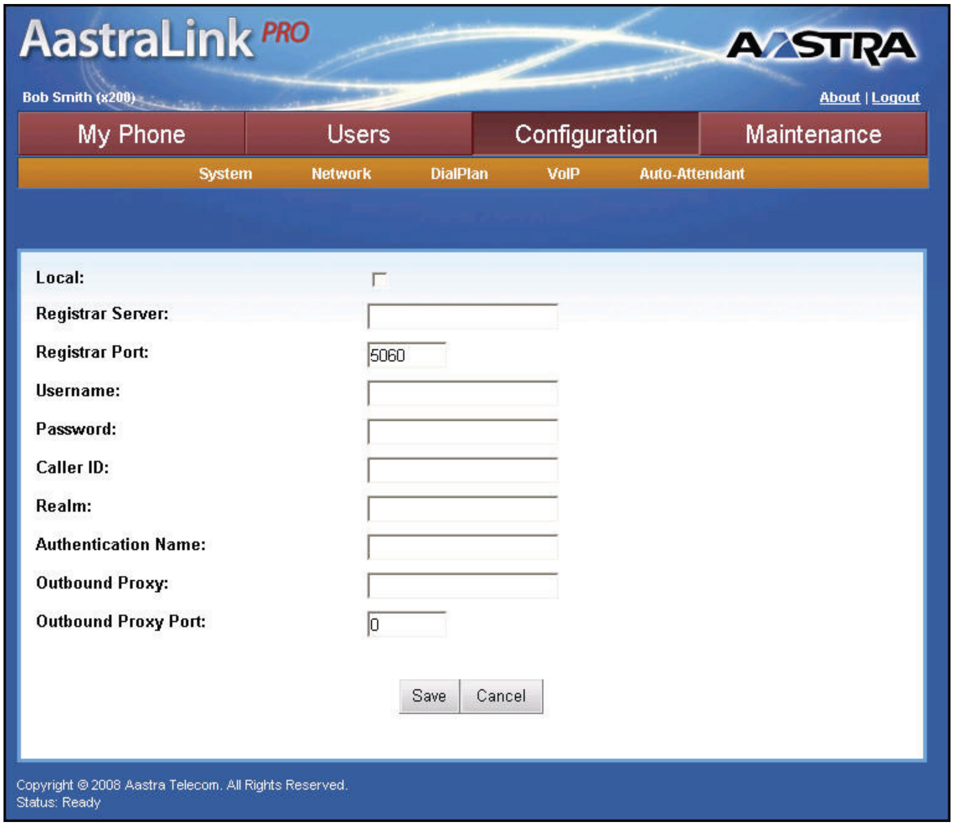
Reference

For a table of dial plan numbers, see Table 4-1 “AastraLink Pro 160 Dialplan” on page 4-32.

Calling party identification

By default, the AastraLink Pro 160 sets the calling party name and number (CLID) in the **FROM:** address of the SIP trunk call, using the extension number of the phone which originated the call. In cases where the SIP trunk service provider does not accept arbitrary CLID, AastraLink allows a static CLID to be provisioned instead; setting the "Caller ID" field on the SIP trunk configuration overrides the per-call CLID and uses this value for all outgoing calls placed to the SIP trunk.

On the VoIP Menu screen, clicking on a dial prefix in the "**Dial Prefix**" column displays the following SIP trunk configuration screen:


AastraLink PRO
AASTRA
Bob Smith (x200)
About | Logout
My Phone
Users
Configuration
Maintenance
System
Network
DialPlan
VoIP
Auto-Attendant
Save
Cancel
Copyright © 2008 Aastra Telecom. All Rights Reserved.
Status: Ready

Local:	☐
Registrar Server:	
Registrar Port:	5060
Username:	
Password:	
Caller ID:	
Realm:	
Authentication Name:	
Outbound Proxy:	
Outbound Proxy Port:	0

The parameters you can specify for SIP Trunking are:

- **Local**

  Local enables/disables SIP trunking to use the local subnet address for the SIP signalling rather than the external (UPnP / external gateway) address. It is only necessary to set this value if the SIP registrar / outbound proxy is multi-homed on both the private and the public network.

- **Registrar Server**

  Supplied by your service provider. Specifies the IP address of the remote endpoint (service providers registrar server) that connects the AastraLink Pro 160 to your service provider SIP network.

- **Registrar Port**

  Supplied by your service provider. Specifies the port number of the remote device (registrar server) on which SIP communications are received. By default this is set to 5060.

- **Username**

  Supplied by your service provider. A name (usually a phone number) you use to connect to the service provider network. For example: 6174365000.

- **Password**

  Supplied by your service provider. The password you use to access the service provider network. For example: 15000.

- **Caller ID**

  If provisioned, the specified Caller ID is used to override the default FROM: address in the SIP signalling. Refer to "Calling party identification" on page 4-49.

- **Realm**

  Only required if requested by your service provider. Specifies the Authentication domain within the destination network, where SIP call steering to a specific media gateway is required.

- **Authorization Name**

  Only required if requested by your service provider. Used to authenticate during SIP registration using a different account name to the username.

- **Outbound Proxy**

  Only required if your local network does not transparently route SIP calls to the public SIP service provider. Used to route outgoing calls through this device rather than direct to the registrar server.

- **Outbound Proxy Port**

  Only required if using an Outbound Proxy. Specifies the proxy port on the Outbound Proxy.

Adding a SIP Trunk

Use the following procedure to add a SIP Trunk to the AastraLink Pro 160.

AastraLink Web UI

Step	Action
1	Select **Configuration->VoIP->SIP Trunking**
2	To enable SIP trunking, set **Local** to **<On>**
3	Specify the IP Address of the Registrar Server that connects your AastraLink Pro 160 to the service provider network in the **“Registrar Server”** field. For example: 192.32.210.24 Your service provider supplies this IP Address.
4	Accept the “**Registrar Port”** field default setting of **5060**
5	Enter the user name (phone number) assigned to your account in the **“Username”** field. For example: 6174365000 Your service provider supplies this number.
6	Specify the password assigned to your account in the **“Password”** field. For example: 15000 Your service provider supplies this password.
7	Specify a name and/or number in the **“Caller ID”** field. For example: John Davis 5551212 **Note:** Setting the "Caller ID" field on the SIP trunk configuration overrides the per-call CLID, and uses the “Caller ID” value you specify here for all outgoing calls placed to the SIP trunk

AastraLink Web UI

Step	Action
8	Specify values for these parameters only if required by your service provider: **Realm**, **Authorization Name**, **Outbound Proxy**, **Outbound Proxy Port.** Otherwise, leave these fields blank.
9	Click **<Save>** to save your changes.

Clearing a SIP Trunk

You can delete a specific SIP trunk configuration or all SIP trunk configurations from the AastraLink Pro using the **<Clear>** button on the "**SIP Trunking**" menu.

Use the following procedure to clear a configuration for a SIP Trunk on the AastraLink Pro 160.

AastraLink Web UI

Step	Action
1	Select **Configuration->VoIP->SIP Trunking**
Clearing a SIP Trunk Configuration	
2	In the **"Dial Prefix"** column, place a check mark in the box for the SIP trunk configuration you want to delete.
3	Click **<Clear>**. The following message displays: *"Are you sure you would like to delete the selected items?"*
4	Click **YES** to delete the SIP trunk." The SIP trunk configuration you selected is deleted from the AastraLink Pro 160.
Clear All SIP Trunk Configurations	
5	In the **"Dial Prefix"** check box, place a check mark in the box to select ALL SIP trunk configurations.

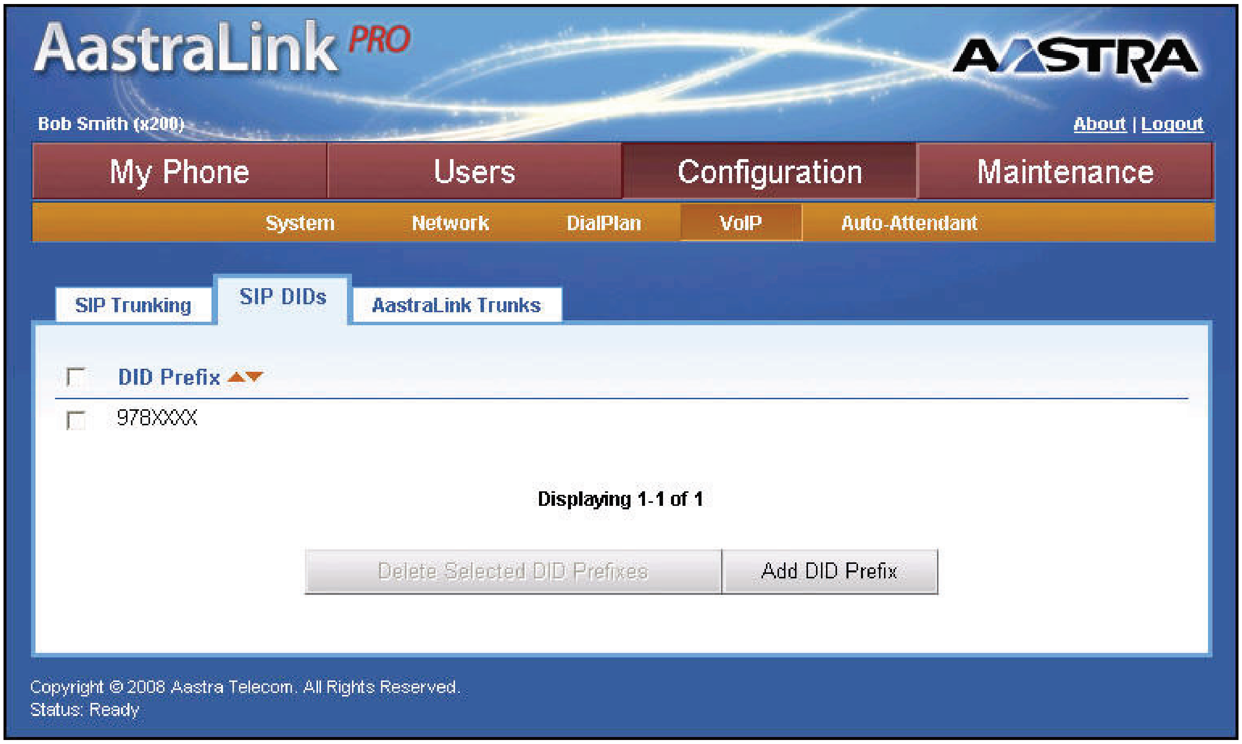
AastraLink Web UI

Step	Action
6	Click **<Clear>**. The following message displays: *"Are you sure you would like to delete the selected items?"*
7	Click **YES** to delete all SIP trunks." All the SIP trunk configurations are deleted from the AastraLink Pro 160.

SIP Direct Inward Dialing (DID)

An administrator can provide SIP Direct Inward Dialing (DID) prefixes for SIP trunks. Direct Inward Dialing (DID) is a service of a local phone company that provides a block of telephone numbers for calling into a company's private branch exchange (PBX) system.

Using DID, a company can offer its employees a different direct-dial PSTN number for each SIP phone, with either system-wide DID pattern matching or direct-mapped user DID entries used to route calls.


AastraLink PRO
AASTRA
Bob Smith (x200)
About | Logout
My Phone
Users
Configuration
Maintenance
System
Network
DialPlan
VoIP
Auto-Attendant
SIP Trunking
SIP DIDs
AastraLink Trunks
Delete Selected DID Prefixes
Add DID Prefix

☐	DID Prefix ▲▼
☐	978XXXX

Displaying 1-1 of 1

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Status: Ready

This feature on the VoIP Menu applies on a global basis for all phones in the AastraLink network.

Note: Direct mapping DIDs have highest priority, followed by patterns, and then the Interactive Voice Response (IVR) if no DID is matched. SIP DID mapping can also be applied on a phone-by-phone basis using the SIP DID Number parameter when editing or adding phones on the **Users Menu**.

Adding a SIP DID

Use the following procedure to add a SIP DID to the AastraLink Pro 160.

AastraLink Web UI

Step	Action
1	Select **Configuration->VoIP->SIP DIDs.**
2	Click **<Add DID Prefix>**.
3	Enter the number for the DID prefix in the text box and click **<Add>**. For example, 978555. The SIP DID displays as: 9785553XXXX.

Deleting a SIP DID

Use the following procedure to delete a SIP DID from the AastraLink Pro 160.

AastraLink Web UI

Step	Action
1	Select **Configuration->VoIP->SIP DIDs.**
Deleting a single SIP DID	
2	In the **"DID Prefix"** column, place a check mark in the box for the SIP DID you want to delete.
3	Click **<Delete Selected DID Prefixes>**. The following message displays: *"Are you sure you would like to delete the selected items?"*
4	Click **YES** to delete the SIP DID." The SIP DID you selected is deleted from the AastraLink Pro 160.

AastraLink Web UI

Step	Action
Deleting All SIP DIDs	
5	In the **“DID Prefix”** check box, place a check mark in the box to select ALL SIP DIDs.
6	Click **<Delete Selected DID Prefixes>**. The following message displays: *“Are you sure you would like to delete the selected items?”*
7	Click **YES** to delete all SIP DIDs.” All the SIP DIDs are deleted from the AastraLink Pro 160.

AastraLink Trunking

You enable AastraLink trunking to support internetworking between Aastra IP phone networks. For example, if you have an office in Atlanta, in Boston and in Chicago, you can configure AastraLink trunks between the offices (Figure 4-7).

When AastraLink Pro 160 devices are networked across a LAN/WAN, IP phone users can make calls between the sites by dialing the following:

(prefix digit) + (access digit) + (extension)

Where:

prefix digit = 7 (default)

access digit = 0 - 9 (assigned by the Administrator)

extension = 3 or 4 digit extension number

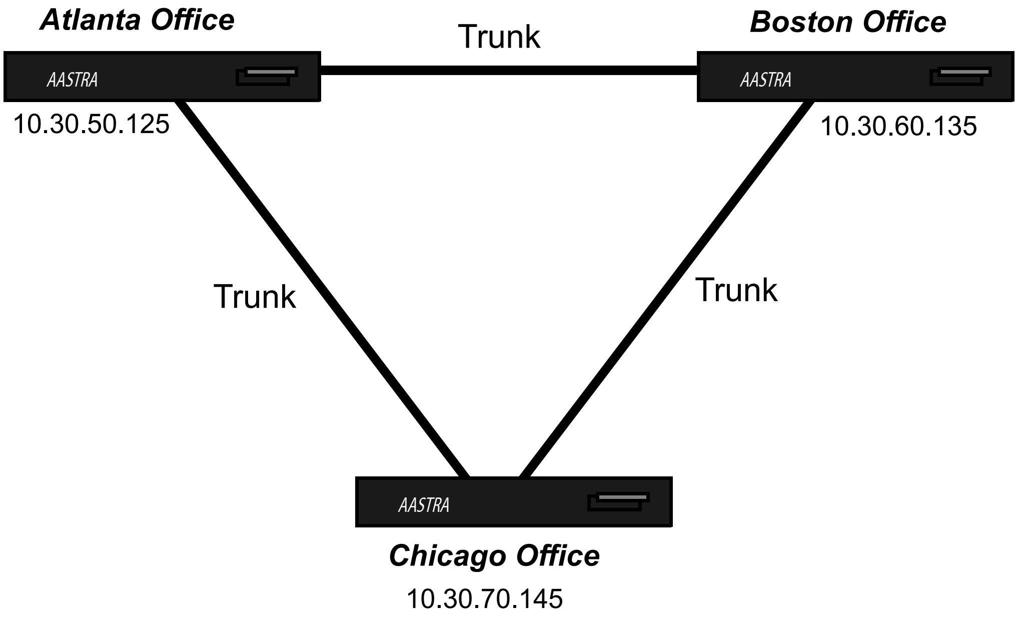

Atlanta Office
Trunk
Boston Office
AASTRA
AASTRA
10.30.50.125
10.30.60.135
Trunk
Trunk
AASTRA
Chicago Office
10.30.70.145

Figure 4-7. **AastraLink Trunks Between Atlanta, Boston, and Chicago Offices**

When you enable AastraLink trunking, you assign a unique access digit to each AastraLink device in your network. For example, suppose you assign the access digit **1** to the AastraLink in the Boston office. Then, the dial prefix for the Boston office is as follows:

dial prefix Boston = 7 + 1 + (number)

If you are located in the Atlanta office, and you want to reach extension **200** in the Boston office, you would dial **71200.**

Note: Calls between AastraLink systems require a flat network topology, and do not support UPnP / static port-forwarding. (For example, the trunks do not work through NAT firewall connections).

Connections between sites should be done using either VPN routing or wide-area direct routing so that the AastraLink to AastraLink trunk connections do not traverse a network address translation boundary.

Configuration Parameters

The parameters you can specify for AastraLink trunking are:

- **Hostname**

  Specifies the IP address or FQDN of the remote AastraLink.

- **Username**

  Specifies the user name (a simple number string) that you use to access the trunk. For example, 100.

- **Port**

  Specifies the port number of the remote AastraLink on which communications are received. By default this is set to 4569.

Configuration Guidelines

When you configure AastraLink Pro 160 trunks, note the following guidelines:

- You can configure a maximum of 10 AastraLink trunks and user names on a single AastraLink Pro 160 device.
- You must assign the *same* user name to each end of the trunk.
- AastraLink IP phone network can have the same, or different, dialing plans.

- Currently, global phone directory synchronization between AastraLink Pro 160 devices is not supported. Therefore, users can access phone directories for their local AastraLink IP phone network only.
- AastraLink trunking requires a flat network. The AastraLink devices do not support UPnP operation through a gateway/router/firewall.
- Before you use the Web UI to configure AastraLink trunks, we strongly recommend that you do the following:
  - Assign an access digit to each AastraLink Pro 160 device in your network.
  - Make a list of the trunks you want to configure.
  - Identify the user name for each trunk you are configuring.

AastraLink Trunking Example

For example, suppose the system administrator wants to configure three trunks:

- Atlanta/Boston
- Atlanta/Chicago
- Boston/Chicago

The administrator begins by assigning access digits to each of the AastraLink Pro 160 devices, as shown in the table below:

AastraLink Pro 160	IP address	Access Digit
Atlanta	10.30.50.125	0
Boston	10.30.60.135	1
Chicago	10.30.70.145	2

The system administrator then assigns a user name to each trunk:

Trunk	User Name
Atlanta - Boston	100
Atlanta - Chicago	101
Boston - Chicago	102

Based on these parameters defined by the administrator, the dial prefix for each AastraLink network in this example is as follows:

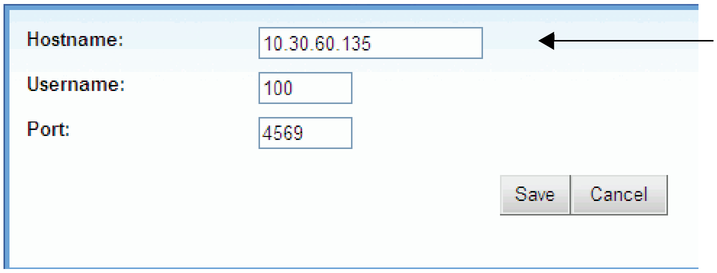
dial prefix Atlanta = 7 + 0 + (number)

dial prefix Boston = 7 + 1 + (number)

dial prefix Chicago = 7 + 2 + (number)

Once the AastraLink trunking information is mapped out, the administrator is ready to configure the trunk between Atlanta and Boston, and does the following steps:

1. Logs into the Atlanta AastraLink device (10.30.50.125).
2. Clicks the dial prefix for the destination end of the trunk. In this case, the Boston AastraLink network: 7 + 1 + (number).
3. Specifies the destination hostname (10.50.60.135) and user name, and then saves the changes.



Hostname: 10.30.60.135
Username: 100
Port: 4569

Boston AastraLink Pro 16

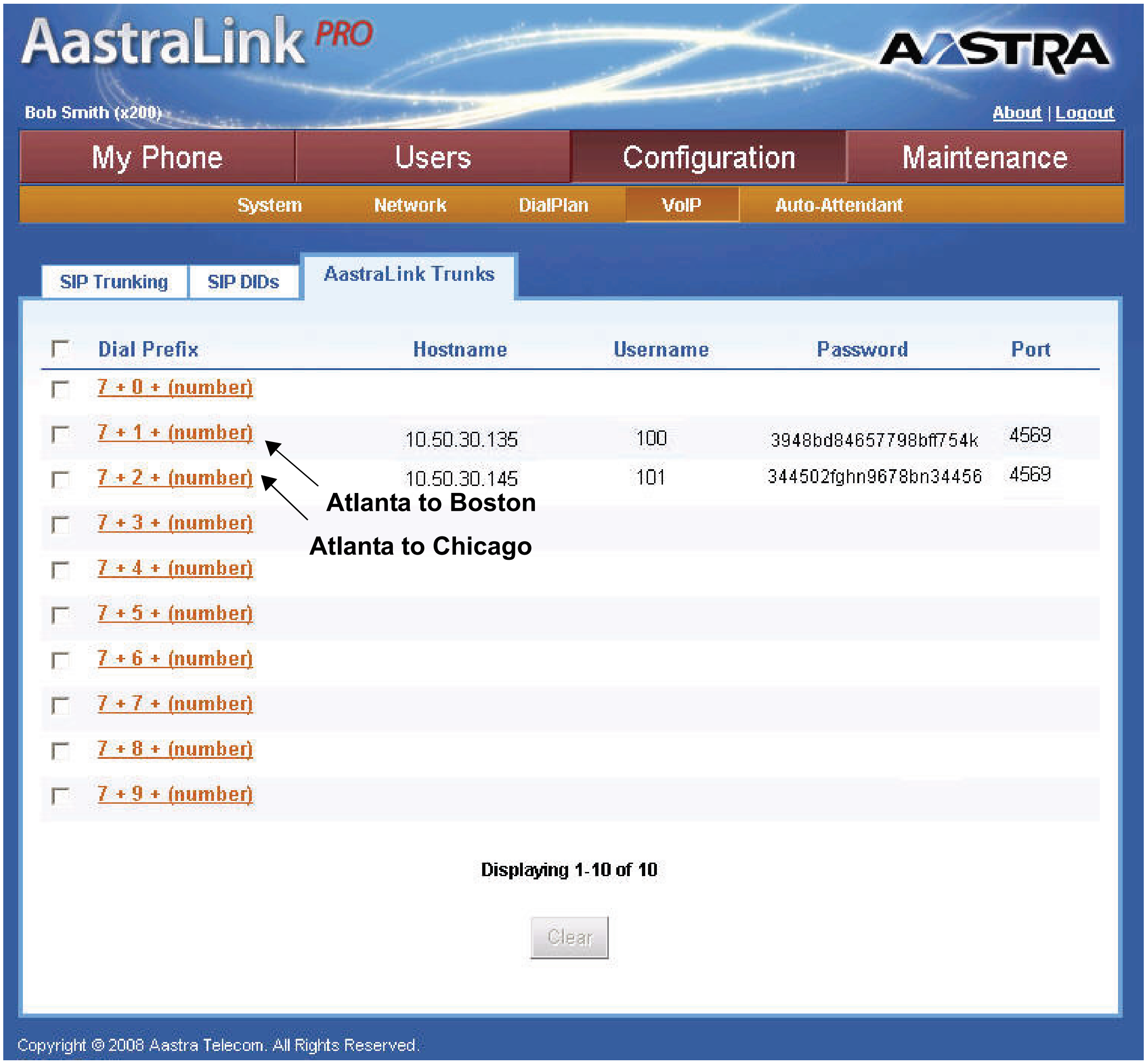
The administrator is now ready to configure the other end of the trunk, and does the following steps:

1. Logs into the Boston AastraLink device (10.30.60.135).
2. Clicks the dial prefix for the Atlanta AastraLink network: 7 + 0 + (number).
3. Specifies the destination hostname (10.30.50.125), and the same user name as used for the Boston end of the trunk, then saves the changes.

At this point, the trunk between Atlanta and Boston is complete. To configure the trunk between Atlanta and Chicago, the administrator repeats these steps, using the Chicago dial prefix/hostname as the destination end of the trunk.

Note the following examples:

- Figure 4-8 shows the Atlanta /Boston, and Atlanta /Chicago trunks.
- Figure 4-9 shows the Boston/Atlanta, and Boston /Chicago trunks.
- Figure 4-10 shows the Chicago/Atlanta, and Chicago/Boston trunks.


AastraLink PRO
AASTRA
Bob Smith (x200)
About | Logout
My Phone
Users
Configuration
Maintenance
System
Network
DialPlan
VoIP
Auto-Attendant
SIP Trunking
SIP DIDs
AastraLink Trunks
Displaying 1-10 of 10
Clear
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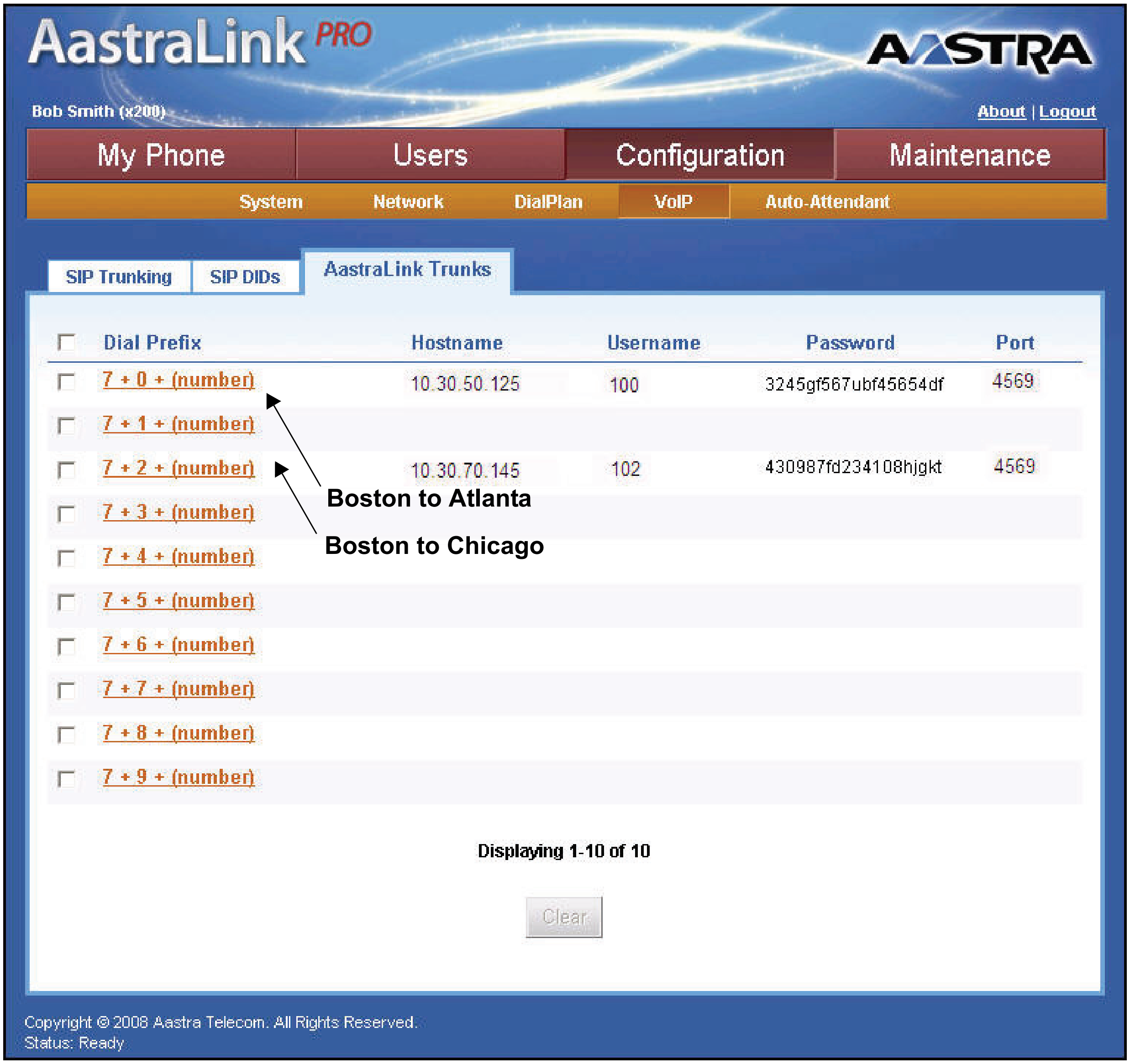
☐	Dial Prefix	Hostname	Username	Password	Port
☐	7 + 0 + (number)				
☐	7 + 1 + (number)	10.50.30.135	100	3948bd84657798bff754k	4569
☐	7 + 2 + (number)	10.50.30.145	101	344502fghn9678bn34456	4569
☐	7 + 3 + (number)				
☐	7 + 4 + (number)				
☐	7 + 5 + (number)				
☐	7 + 6 + (number)				
☐	7 + 7 + (number)				
☐	7 + 8 + (number)				
☐	7 + 9 + (number)				

Atlanta to Boston

Atlanta to Chicago

Figure 4-8. Trunks Between Atlanta/Boston and Atlanta/Chicago


AastraLink PRO
AASTRA
Bob Smith (x200)
About | Logout
My Phone
Users
Configuration
Maintenance
System
Network
DialPlan
VoIP
Auto-Attendant
SIP Trunking
SIP DIDs
AastraLink Trunks
Boston to Atlanta
Boston to Chicago
Clear

☐	Dial Prefix	Hostname	Username	Password	Port
☐	7 + 0 + (number)	10.30.50.125	100	3245gf567ubf45654df	4569
☐	7 + 1 + (number)				
☐	7 + 2 + (number)	10.30.70.145	102	430987fd234108hjgkt	4569
☐	7 + 3 + (number)				
☐	7 + 4 + (number)				
☐	7 + 5 + (number)				
☐	7 + 6 + (number)				
☐	7 + 7 + (number)				
☐	7 + 8 + (number)				
☐	7 + 9 + (number)				

Displaying 1-10 of 10

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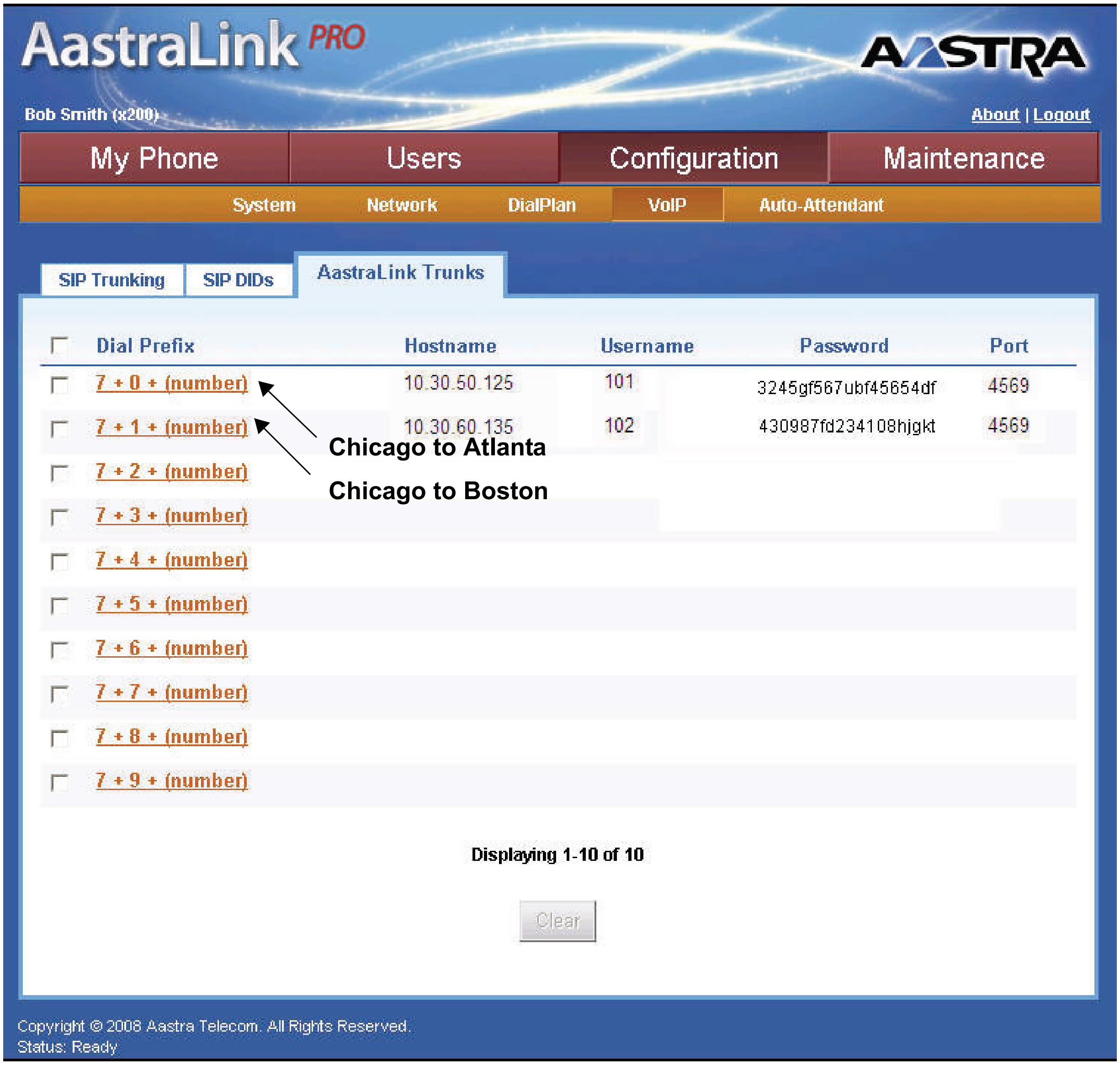
Status: Ready

Figure 4-9. **Trunks Between Boston/Atlanta and Boston/Chicago**


AastraLink PRO
AASTRA
Bob Smith (x200)
About | Logout
My Phone
Users
Configuration
Maintenance
System
Network
DialPlan
VoIP
Auto-Attendant
SIP Trunking
SIP DIDs
AastraLink Trunks
Clear

☐	Dial Prefix	Hostname	Username	Password	Port
☐	7 + 0 + (number)	10.30.50.125	101	3245gf567ubf45654df	4569
☐	7 + 1 + (number)	10.30.60.135	102	430987fd234108hjgkt	4569
☐	7 + 2 + (number)				
☐	7 + 3 + (number)				
☐	7 + 4 + (number)				
☐	7 + 5 + (number)				
☐	7 + 6 + (number)				
☐	7 + 7 + (number)				
☐	7 + 8 + (number)				
☐	7 + 9 + (number)				

Chicago to Atlanta

Chicago to Boston

Displaying 1-10 of 10

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Status: Ready

Figure 4-10. Trunks Between Chicago/Atlanta and Chicago/Boston

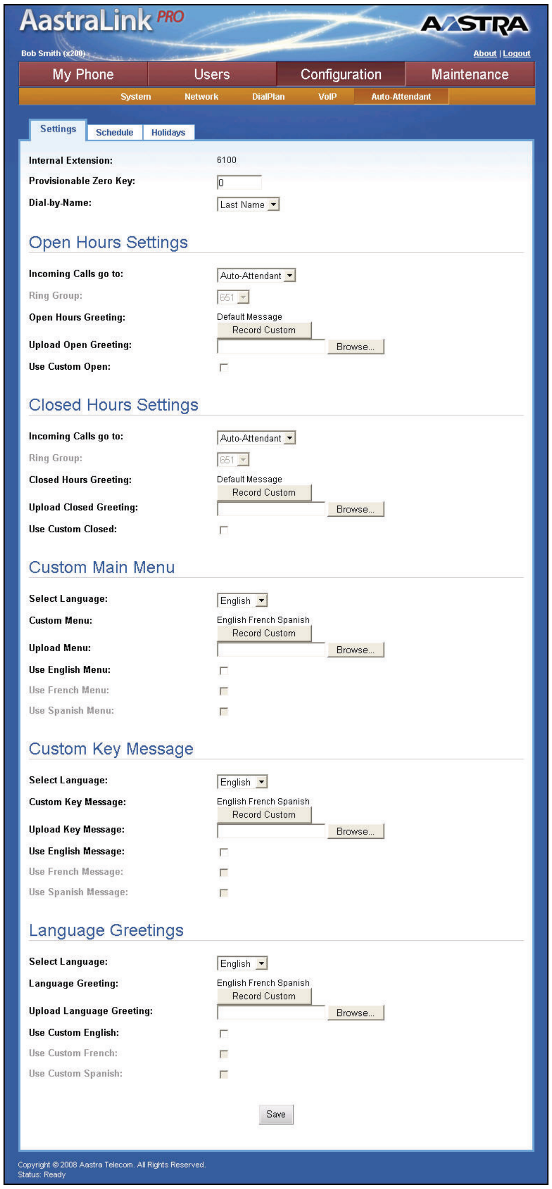
Use the following procedure to enable AastraLink trunking between two AastraLink Pro 160 devices.

AastraLink Web UI

Step	Action
1	Select **Configuration->VoIP->AastraLink Trunks**
2	Click the **Dial Prefix** that matches the destination AastraLink network. For example, if you are configuring a trunk between Atlanta and Boston, and assigned the access digit 1 to the Boston AastraLink network, then you would click on 7 + 1 + (number).
3	Specify the **Hostname**, or FQDN, of the destination AastraLink device. For example: 10.30.50.135
4	Specify a **Username** for the trunk. The Username is a simple number string that you use to access the trunk. For example: 100.
5	Accept the default **Port** setting of **4569**
6	Click **<Save>** to save your changes. At this point the destination end of the trunk is configured. Now, repeat steps 1 - 6 to configure the other end of the trunk. For example, suppose the trunk is between Atlanta and Boston. You just logged into the Atlanta AastraLink device and configured the trunk from Atlanta (source) to Boston (destination). Now, you need to login to the Boston AastraLink device and configure the trunk from Boston (source) to Atlanta (destination). **Note:** Remember to use an identical Username for both ends of the trunk.

Configuring Auto-Attendant

You configure Auto-Attendant parameters from the **Configuration->Auto-Attendant** menu shown below. The screen below has no user groups configured on the AastraLink Pro 160.


AastraLink PRO
AASTRA
Bob Smith (x200)
About | Logout
My Phone
Users
Configuration
Maintenance
System
Network
DialPlan
VoIP
Auto-Attendant
Settings
Schedule
Holidays
Record Custom
Browse...
Save

Internal Extension: 6100
Provisionable Zero Key: 0
Dial-by-Name: Last Name

Open Hours Settings

Incoming Calls go to: Auto-Attendant
Ring Group: 651
Open Hours Greeting: Default Message
Upload Open Greeting:
Use Custom Open: ☐

Closed Hours Settings

Incoming Calls go to: Auto-Attendant
Ring Group: 651
Closed Hours Greeting: Default Message
Upload Closed Greeting:
Use Custom Closed: ☐

Custom Main Menu

Select Language: English
Custom Menu: English French Spanish
Upload Menu:
Use English Menu: ☐
Use French Menu: ☐
Use Spanish Menu: ☐

Custom Key Message

Select Language: English
Custom Key Message: English French Spanish
Upload Key Message:
Use English Message: ☐
Use French Message: ☐
Use Spanish Message: ☐

Language Greetings

Select Language: English
Language Greeting: English French Spanish
Upload Language Greeting:
Use Custom English: ☐
Use Custom French: ☐
Use Custom Spanish: ☐

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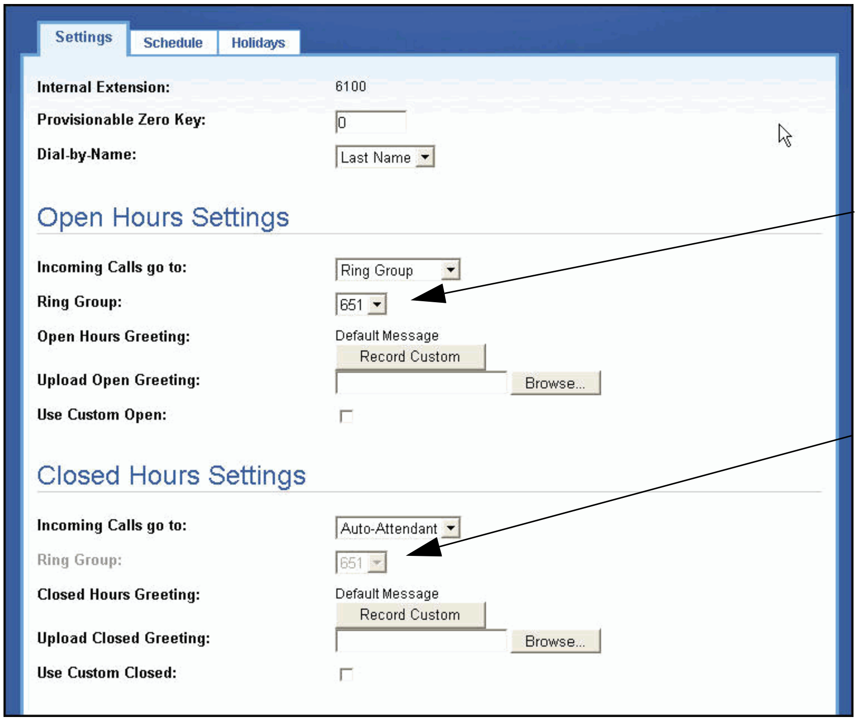
Status: Ready

Figure 4-11. Auto-Attendant Menu with No User Groups

If you have User Groups configured on the AastraLink Pro 160, the Auto-Attendant screen displays as shown below.



Internal Extension: 6100
Provisionable Zero Key: 0
Dial-by-Name: Last Name

Open Hours Settings

Incoming Calls go to: Ring Group
Ring Group: 651
Open Hours Greeting: Default Message
Upload Open Greeting:
Use Custom Open: ☐

Closed Hours Settings

Incoming Calls go to: Auto-Attendant
Ring Group: 651
Closed Hours Greeting: Default Message
Upload Closed Greeting:
Use Custom Closed: ☐

User Group Enabled

User Group Disabled

Figure 4-12. Auto-Attendant Menu with User Group

How Auto-Attendant Works

The Auto-Attendant feature allows you to specify how the AastraLink Pro 160 routes incoming calls. That is, you can configure the Auto-Attendant so that incoming calls are received in one of the following ways:

- First by the Auto-Attendant (then by an Operator), or
- First by the Operator (then by the Auto-Attendant), or
- First by a designated user group (then by the Auto-Attendant)

Note: It is possible for a caller to reach the Operator's voicemail account if they are on-duty and do not answer; they can reach the Auto-Attendant using the "Escape to Extension" feature once they have reached the prompts in the Operator's voice mail.

When callers reach the Auto-Attendant, they are prompted to do one of the following actions:

- Select a language to enable while using Auto-Attendant features (if more than one language is available; default is English)
- Enter the extension of the person they are calling. The Auto-Attendant then transfers the call.
- Dial by name. Depending on the configuration set on the AastraLink Pro, the caller can dial by first name or by last name. If there are multiple listings, the caller is prompted to select from the list. The Auto-Attendant then transfers the call.
- Dial 0 (operator). The Auto-Attendant transfers the call to the operator.

The Auto-Attendant Menu has three tabs:

- **Settings**
- **Schedule**
- **Holidays**

Note: If dial-by-name is disabled, the option is still mentioned in the default main menu announcement. An administrator can record a custom main menu in which they do not mention the feature if they choose to disable it and do not want it announced.

Each of these are described in the following paragraphs.

Settings for the Auto-Attendant

You can configure the following for the Auto-Attendant Settings:

- **Open Hour Settings**
- **Closed Hour Settings**
- **Custom Main Menu**
- **Custom Key Message**
- **Language Greetings** (French, English, or Spanish)

The **Open Hour Settings** and **Closed Hour Settings** allow the administrator to select the hours for which the Auto-Attendant handles calls. These parameters also allow you to record a custom greeting as required. For example, an administrator can record a greeting for incoming calls during open hours and another greeting for closed hours. The administrator has the option of uploading a new custom greeting (***.wav*** file), or using the default greetings.

The **Custom Main Menu** allows the administrator to select the language for the Auto-Attendant to use when it answers a call. These parameters also allow the administrator to record the Main Menu in a specific language and upload language files if required.

The **Custom Key Message** allows the administrator to select the language for the Auto-Attendant to use for a specific message. It also allows the administrator to record a custom message, or upload a message file (***.wav*** file) if required. For example, you could record a message concerning details about the business or other general contact info. The announcement is restricted to the '3' key to keep the Interactive Voice Response (IVR) special-keys contiguous.

The **Language Greetings** allow the administrator to select the language for the greeting when a call comes into the Auto-Attendant. An Administrator can also record a custom language greeting, or upload a language greeting file (***.wav*** file) if required.

Configuring Settings for the Auto-Attendant

Use the following procedure to specify the Auto-Attendant general settings.

AastraLink Web UI

Step	Action
1	Select **Configuration->Auto-Attendant->Settings**
General Settings	
2	In the "**Provisionable Zero Key**" field, enter the number to which calls are routed when the '**0**' key is pressed from the IVR, by an incoming caller. (Default is zero so that callers are routed to the Operator).

AastraLink Web UI

Step	**Action**
3	In the "**Dial-by-Name**" field, select the method you want the Auto-Attendant to use when an incoming caller needs to dial by name to reach the calling party. Valid values are: • **Disabled** • **Last Name** (default) • **First Name** **Note:** If dial-by-name is disabled, the option is still mentioned in the default main menu announcement. An administrator can record a custom main menu in which they do not mention the feature if they choose to disable it and do not want it announced.
Open Hour Settings	
4	Set the destination for incoming calls in the **"Incoming calls go to"** field to one of the following options: • **Auto-Attendant** ((default) all incoming calls go through the Auto-Attendant). • **Operator** (all incoming calls go to the Operator (if on-duty, goes to the Auto-Attendant if off-duty). • **User Group** (all incoming calls go to a designated user group). **Note:** The "**User Group**" option displays only if you have User Groups configured on the AastraLink.
5	If you select the **User Group** option in step 2, set the virtual extension of the user group in the "**User Group**" field. Skip this step if no User Groups are configured on the AastraLink Pro 160. For more information on virtual extensions, see Chapter 3, the section, "Virtual Extension Numbers" on page 3-16.
6	The Auto-Attendant has a built in default greeting that plays during open hours. To specify a custom greeting, do the following: • Click on **<Record Custom>** for the **"Open Hours Greeting"** field. The Operator IP phone rings. Answer the Operator IP phone, and record your custom greeting, as prompted. Refer to *Custom Recordings on* page 4-82 for more information.
7	In the "**Use Custom Open**" field, place a check mark in the box for the Auto-Attendant to use your custom greeting.

AastraLink Web UI

Step	Action
8	To upload a greeting file that plays during open office hours, do the following: • Click on **<Browse>** for the **"Upload Open Greeting"** field. Browse to the location on the server where the ***.wav*** file is stored, that contains the greeting you want the Auto-Attendant to use. Click **<Open>**. The file you selected is uploaded to the AastraLink Pro.
9	Click **<Save>** to save your changes.
Closed Hour Settings	
10	Set the destination for incoming calls in the **"Incoming calls go to"** field to one of the following options: • **Auto-Attendant** ((default) all incoming calls go through the Auto-Attendant). • **Operator** (all incoming calls go to the Operator). • **User Group** (all incoming calls go to a designated user group). **Note:** The "**User Group**" option displays only if you have User Groups configured on the AastraLink.
11	If you select the **User Group** option in step 2, set the extension of the user group in the "**User Group**" field. Skip this step if no User Groups are configured on the AastraLink Pro 160.
12	The Auto-Attendant has a built in default greeting that plays during closed hours. To specify a custom greeting, do the following: • Click on **<Record Custom>** for the **"Closed Hours Greeting"** field. The Operator IP phone rings. Answer the Operator IP phone, and record your custom greeting, as prompted. Refer to *Custom Recordings on* page 4-82 for more information.
13	In the "**Use Custom Closed**" field, place a check mark in the box for the Auto-Attendant to use your custom greeting.

AastraLink Web UI

Step	Action
14	To upload a greeting file that plays during closed office hours, do the following: • Click on **<Browse>** for the **"Upload Closed Greeting"** field. Browse to the location on the server where the ***.wav*** file is stored, that contains the greeting you want the Auto-Attendant to use. Click **<Open>**. The file you selected is uploaded to the AastraLink Pro.
15	Click **<Save>** to save your changes.
Custom Main Menu Settings	
16	In the "**Select Language**" field, select the language for which you want to modify the Auto-Attendant Menu items. Valid values are: **English**, **French**, and **Spanish** (default is **English**).
17	The Auto-Attendant has a built in default Main Menu that plays using the system language. To specify a custom Main Menu using English, French, and Spanish, do the following: • Click on **<Record Custom>** for the **"Custom Menu"** field. The Operator IP phone rings. Answer the Operator IP phone, and record your custom Main Menu in each of the languages required (English, French, Spanish), as prompted. Refer to *Custom Recordings on* page 4-82 for more information.
18	In the "**Use English Menu**", "**Use French Menu**", and/or "**Use Spanish Menu**" field(s), place a check mark in the box for the Auto-Attendant to use the custom Main Menu you recorded.
19	To upload a Main Menu announcement file, do the following: • Click on **<Browse>** for the **"Upload Menu"** field. Browse to the location on the server where the ***.wav*** file is stored, that contains the Main Menu you want the Auto-Attendant to use. Click **<Open>**. The file you selected is uploaded to the AastraLink Pro.
20	Click **<Save>** to save your changes.

AastraLink Web UI

Step	**Action**
Custom Key Message	
21	In the "**Select Language**" field, select the language for which you want to modify the Custom Key Message. Valid values are: **English**, **French**, and **Spanish** (default is **English**).
22	The Auto-Attendant has a built in default key message that plays using the system language. To specify a custom key message using English, French, and Spanish, do the following: • Click on **<Record Custom>** for the **"Custom Key Message"** field. The Operator IP phone rings. Answer the Operator IP phone, and record your custom Key Message in each of the languages required (English, French, Spanish), as prompted. Refer to *Custom Recordings on* page 4-82 for more information.
23	In the "**Use English Message**", "**Use French Message**", and/or "**Use Spanish Message**" field(s), place a check mark in the box for the Auto-Attendant to use the custom Key Messages you recorded.
24	To upload a Key Message announcement file, do the following: • Click on **<Browse>** for the **"Upload Key Message"** field. Browse to the location on the server where the ***.wav*** file is stored, that contains the Key Message you want the Auto-Attendant to use. Click **<Open>**. The file you selected is uploaded to the AastraLink Pro.
25	Click **<Save>** to save your changes.
Language Greetings	
26	In the "**Select Language**" field, select the language for which you want to modify the Language Greeting. Valid values are: **English**, **French**, and **Spanish** (default is **English**).

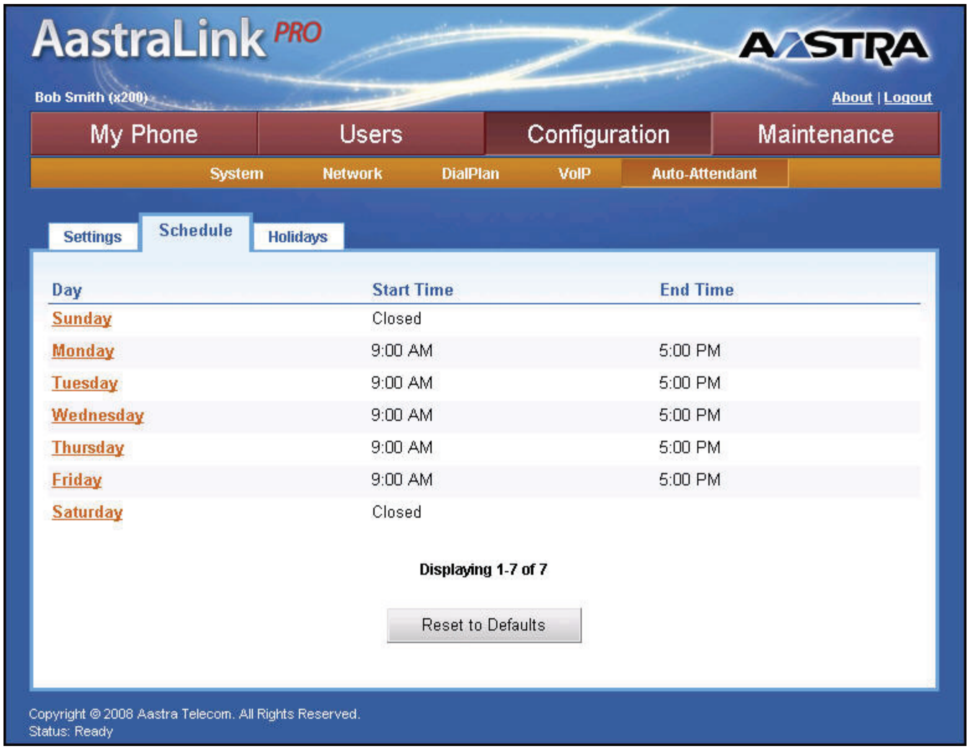
AastraLink Web UI

Step	Action
27	The Auto-Attendant has a built in default language greeting that plays using the system language. To specify a custom language greeting using English, French, and Spanish, do the following: • Click on **<Record Custom>** for the **"Language Greeting"** field. The Operator IP phone rings. Answer the Operator IP phone, and record your custom language greeting(s) in each of the languages required (English, French, Spanish), as prompted. Refer to *Custom Recordings on* page 4-82 for more information.
28	In the "**Use Custom English**", "**Use Custom French**", and/or "**Use Custom Spanish**" field(s), place a check mark in the box for the Auto-Attendant to use the custom language greetings you recorded.
29	To upload a language greeting announcement file, do the following: • Click on **<Browse>** for the **"Upload Language Greeting"** field. Browse to the location on the server where the ***.wav*** file is stored, that contains the language greeting(s) you want the Auto-Attendant to use. Click **<Open>**. The file you selected is uploaded to the AastraLink Pro.
30	Click **<Save>** to save your changes.

Schedule for the Auto-Attendant

By default, the Auto-Attendant hours are set to open at 9:00 A.M. and close at 5:00 P.M for the business days of Monday through Friday. Saturday and Sunday are closed hours. Calls that come into the Auto-Attendant during these times are handled according to the configuration set by the administrator in the Auto-Attendant Menus.

You can schedule specific open and closed hours of operation on any of the seven days of the week. You can also select any hour of the day or night when creating the open and closed schedule for the Auto-Attendant.


AastraLink PRO
AASTRA
Bob Smith (x200)
About | Logout
My Phone
Users
Configuration
Maintenance
System
Network
DialPlan
VoIP
Auto-Attendant
Settings
Schedule
Holidays

Day	Start Time	End Time
Sunday	Closed	
Monday	9:00 AM	5:00 PM
Tuesday	9:00 AM	5:00 PM
Wednesday	9:00 AM	5:00 PM
Thursday	9:00 AM	5:00 PM
Friday	9:00 AM	5:00 PM
Saturday	Closed	

Displaying 1-7 of 7

Reset to Defaults

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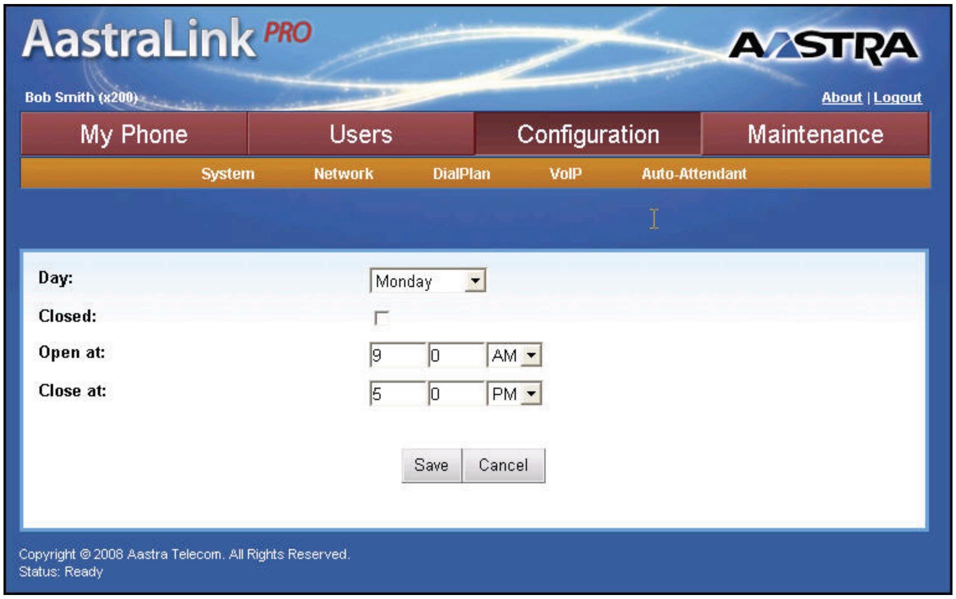
Status: Ready

Figure 4-13. Auto-Attendant Schedule (days)

You can reset the default settings for the Auto-Attendant schedule any time by clicking the **<Reset to Defaults>** button on the Auto-Attendant Schedule (days) screen (see illustration above).


AastraLink PRO
AASTRA
Bob Smith (x200)
About | Logout
My Phone
Users
Configuration
Maintenance
System
Network
DialPlan
VoIP
Auto-Attendant
Save
Cancel

Day: Monday

Closed: ☐

Open at: 9 0 AM

Close at: 5 0 PM

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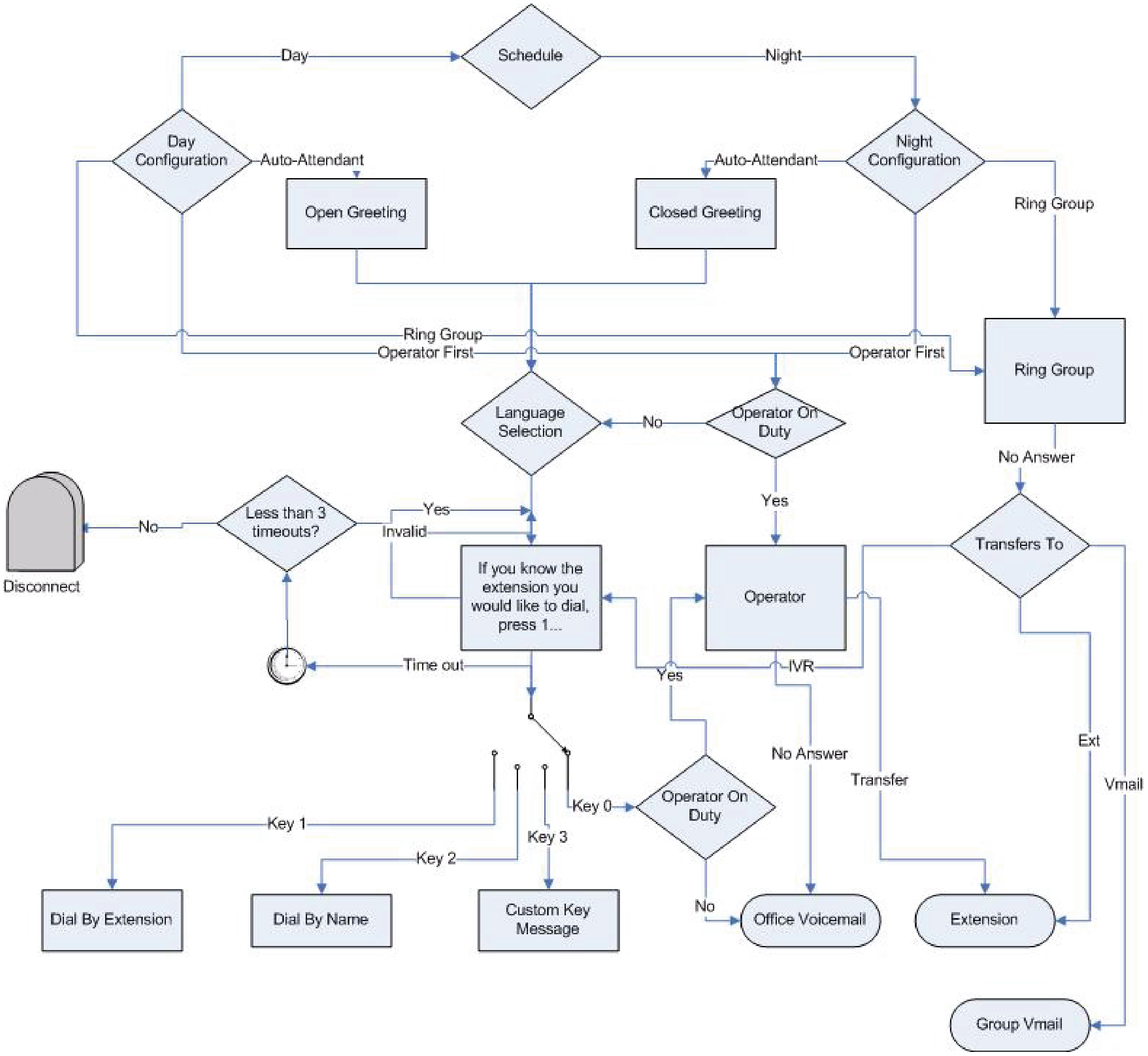
Status: Ready

Figure 4-14. Auto-Attendant Schedule (times)

The following illustration shows the scheduling flow in the Auto-Attendant.


Schedule
Day
Night
Day Configuration
Auto-Attendant
Night Configuration
Auto-Attendant
Open Greeting
Closed Greeting
Ring Group
Ring Group
Operator First
Operator First
Ring Group
Language Selection
No
Operator On Duty
No Answer
Yes
Transfers To
Disconnect
No
Less than 3 timeouts?
Yes
Invalid
If you know the extension you would like to dial, press 1...
Operator
Time out
IVR
Yes
No Answer
Transfer
Ext
Vmail
Key 0
Operator On Duty
Key 1
Key 2
Key 3
No
Dial By Extension
Dial By Name
Custom Key Message
Office Voicemail
Extension
Group Vmail

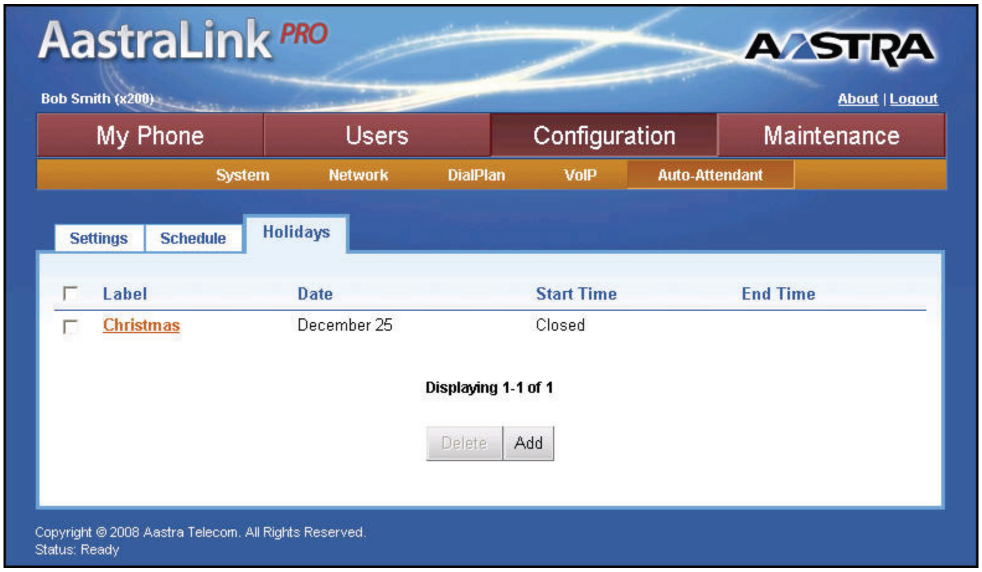
Use the following procedure to specify the Auto-Attendant schedule.

AastraLink Web UI

Step	Action
1	Select **Configuration->Auto-Attendant->Schedule**
2	To begin editing the Auto-Attendant schedule, click on one of the days of the week. For example, click **<Sunday>**
3	Set the **"Day"** field to the day of the week you are configuring.
4	If the office is closed this day, then in the "**Closed**" field, place a check mark in the box and click **<Save>**. You disable the **"Closed"** field by unchecking the box.
5	If the office is open this day, do the following ("Closed" field must be unchecked): • Set the **"Open At"** field to the correct time when the office opens, and set AM or PM as appropriate. • Set the **"Close At"** field to the correct time when the office closes, and set AM or PM as appropriate.
6	Click **<Save>** to save your changes.

Holidays for the Auto-Attendant

By default, there are no holidays scheduled in the Auto-Attendant. Holidays are treated as days during which the regular schedule should be overridden with a custom setting for open/closed hours. You can schedule specific days and times for your office holidays if required. You schedule holidays by entering the holiday name, date, and times, or by specifying the holiday name, date, and "**Closed**", if your office is closed on this holiday.


AastraLink PRO
AASTRA
Bob Smith (x200)
About | Logout
My Phone
Users
Configuration
Maintenance
System
Network
DialPlan
VoIP
Auto-Attendant
Settings
Schedule
Holidays

☐	Label	Date	Start Time	End Time
☐	Christmas	December 25	Closed	

Displaying 1-1 of 1

Delete
Add
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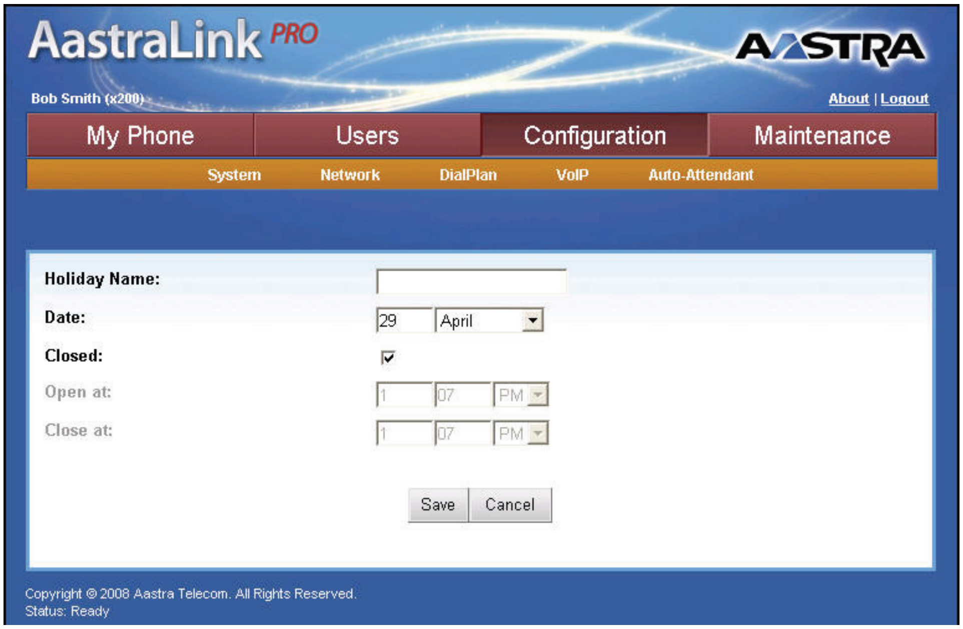
Status: Ready

Figure 4-15. Auto-Attendant Holidays


AastraLink PRO
AASTRA
Bob Smith (x200)
About | Logout
My Phone
Users
Configuration
Maintenance
System
Network
DialPlan
VoIP
Auto-Attendant
Save
Cancel

Holiday Name:
Date: 29 April
Closed: ☑
Open at: 1 07 PM
Close at: 1 07 PM

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Status: Ready

Figure 4-16. Specifying Auto-Attendant Holidays

Note: Holidays are assumed to have annual repetition (i.e. most secular calendar holidays in USA) so are essentially configured as repeating every 12 months. Where holidays repeat on irregular dates - usually due to religious or pagan cycles. For example, the Christian holiday of Good Friday occurs on a Pagan cycle with no fixed annual repeat (actually the friday before the first Sunday after the first fourteenth day cycle of the moon on or after the vernal equinox) - it is necessary to maintain the list manually for each new year.

Adding a Holiday to the Auto-Attendant

Use the following procedure to add a holiday to the Auto-Attendant schedule.

AastraLink Web UI

Step	Action
1	Select **Configuration->Auto-Attendant->Holidays**
2	Click **<Add>.**

AastraLink Web UI

Step	Action
3	Specify a name for the holiday in the "**Holiday Name"** field. For example, **Christmas.**
4	Select the date for the holiday in the **"Date"** field. For example, **25 December.**
5	If the office is closed this day, then in the "**Closed**" field, place a check mark in the box and click **<Save>**. You disable the **"Closed"** field by unchecking the box.
6	If the office is open this day, do the following ("Closed" field must be unchecked): • Set the **"Open At"** field to the correct time when the office opens. • Set the **"Close At"** field to the correct time when the office closes.
7	Click **<Save>** to save your changes.

Deleting a Holiday from the Auto-Attendant

Use the following procedure to add a holiday to the Auto-Attendant schedule.

AastraLink Web UI

Step	Action
1	Select **Configuration->Auto-Attendant->Holidays**
2	Select the holiday that you want to delete by placing a check mark in the box before that holiday. To select all holidays, place a check mark in the box for the "**Label**" field.
3	Click **<Delete>** to delete the holiday(s) you selected. The following prompt displays: *"Are you sure you want to delete the selected items?"*
4	Click **<Yes>** to delete the holiday(s) you selected.

Custom Recordings

You can create custom recordings (for open and closed hours, Main Menus, key messages, language greetings) for the Auto-Attendant if required. Incoming callers hear these custom recordings when accessing and using the Auto-Attendant. For example, you may want to include your company name in the open office greeting. Another example of when you may want to record a custom greeting message is during a holiday period, when your office is closed.

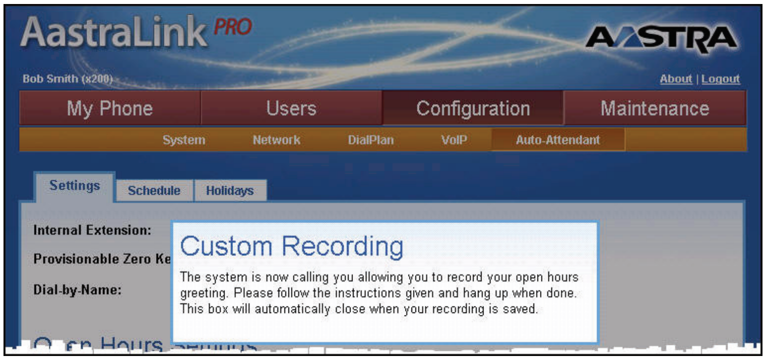
Custom Auto-Attendant announcements are heard by any incoming SIP trunk or IAX trunk call that reaches the Auto-Attendant, as well as by any internal SIP extension who dials 6100 to reach the IVR (though the caller does not receive the language selection as they have already configured one for their phone). When callers dial into the Auto-Attendant from the local IP phone network, they directly access the Auto-Attendant menus.

You record custom recordings using the Operator IP phone. The first extension (200) registered with the IP phone becomes the Operator by default.

Note: Make sure you can access the Operator IP phone before starting the procedure described below.

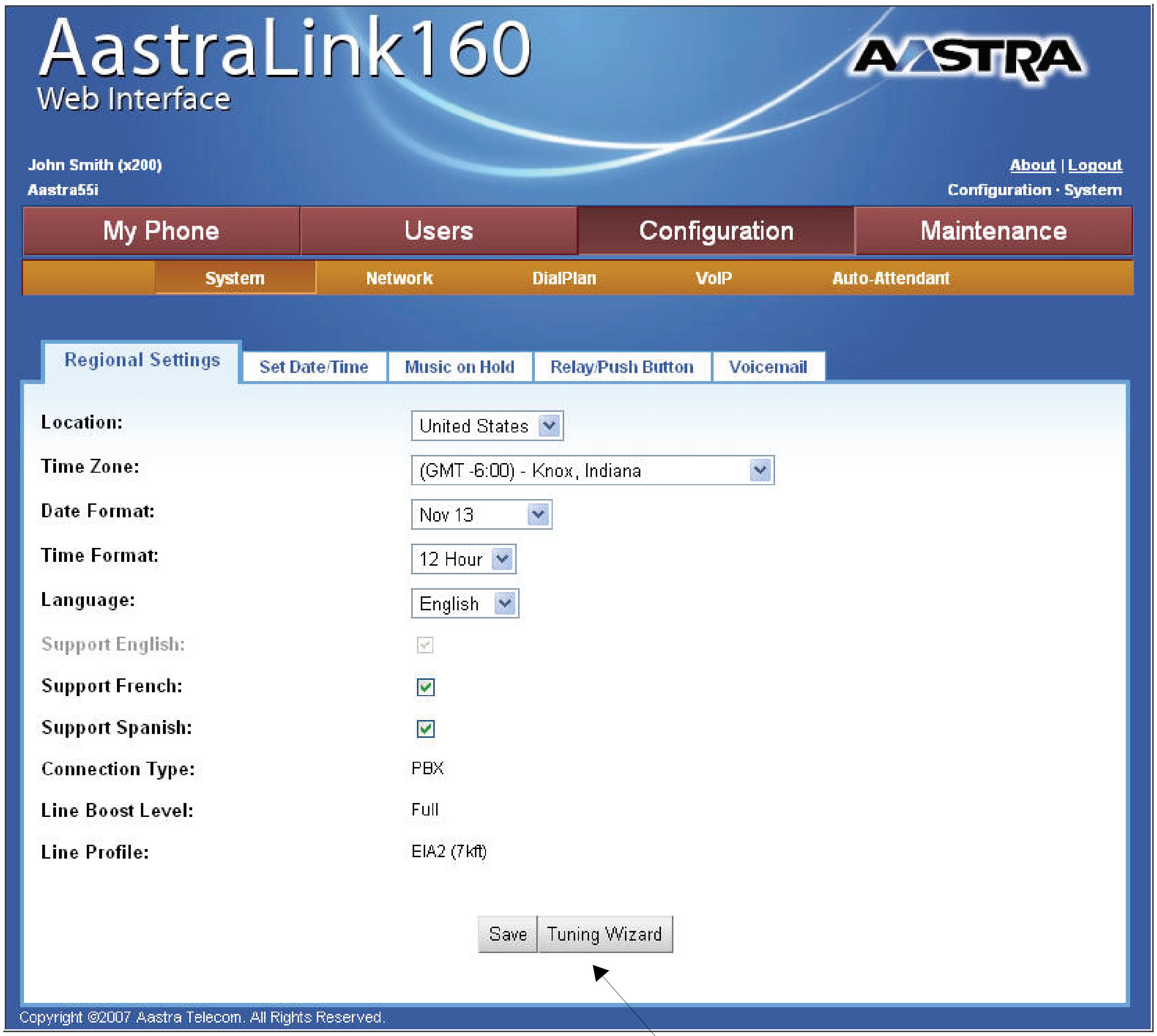
Use the following procedure to specify a custom recording.

AastraLink Web UI

Step	Action
1	Select **Configuration->Auto-Attendant->Settings**
2	To specify a custom recording, click on **<Record Custom>** for the applicable setting on the “**Settings**” tab (Open Hour Settings, Closed Hour Settings, Custom Main Menu, Custom Key Message, or Language Greetings). The Web UI displays a window informing you that the recording process has begun. (The window disappears when the process is complete.)  AastraLink PRO AASTRA Bob Smith (x200) About | Logout My Phone Users Configuration Maintenance System Network DialPlan VoIP Auto-Attendant Settings Schedule Holidays Internal Extension: Provisionable Zero Ke Dial-by-Name: Open Hours Settings Custom Recording The system is now calling you allowing you to record your open hours greeting. Please follow the instructions given and hang up when done. This box will automatically close when your recording is saved.
3	When the Operator IP phone rings, pick up handset.
4	After you hear the tone, speak into the Operator IP phone and record your custom greeting, Main Menu, key message, or language greeting. Press **<#>** when you are finished recording.
5	As prompted by your Operator IP phone, do one of the following: • To re-record the message, press **<1>.** • To hear the message you just recorded, press **<2>.** • To save the message, and use it as the Auto-Attendant custom greeting, press **<3>.**

Configuring Audio Settings (Tuning Wizard)

You configure and refine audio parameters using the Tuning Wizard, located on the **Configuration->Regional Settings** menu shown below.


AastraLink160
Web Interface
AASTRA
John Smith (x200)
Aastra55i
About | Logout
Configuration · System
My Phone
Users
Configuration
Maintenance
System
Network
DialPlan
VoIP
Auto-Attendant
Regional Settings
Set Date/Time
Music on Hold
Relay/Push Button
Voicemail
Save
Tuning Wizard

Location: United States
Time Zone: (GMT -6:00) - Knox, Indiana
Date Format: Nov 13
Time Format: 12 Hour
Language: English
Support English: ☑
Support French: ☑
Support Spanish: ☑
Connection Type: PBX
Line Boost Level: Full
Line Profile: EIA2 (7kft)

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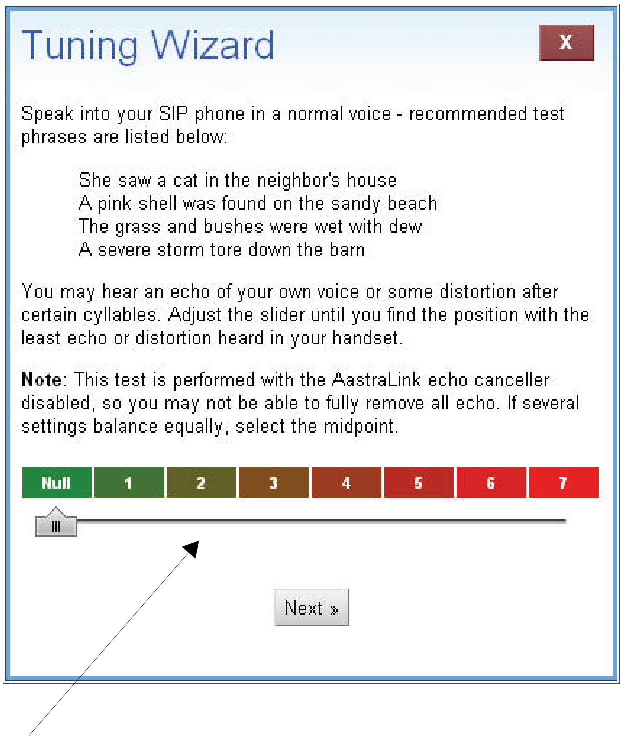
Click to access the AastraLink Tuning Wizard

Figure 4-17. **Regional Settings Menu**

Using the AastraLink Audio Tuning Wizard

The AastraLink Tuning Wizard is an interactive tool that allows you to monitor, and maximize, the audio quality of calls transmitted and received over the AastraLink IP phone network.

As part of the Tuning Wizard process, you place a call from an Administrator IP phone to a destination phone number. Once the destination party answers the call, the Tuning Wizard guides you through a series of audio tests designed to identify any echo and/or distortion that exists on the AastraLink phone lines. You use a slide bar to adjust audio settings accordingly, until the audio quality best suits your comfort level and deployment environment.



Tuning Wizard

Speak into your SIP phone in a normal voice - recommended test phrases are listed below:

She saw a cat in the neighbor's house
A pink shell was found on the sandy beach
The grass and bushes were wet with dew
A severe storm tore down the barn

You may hear an echo of your own voice or some distortion after certain cyllables. Adjust the slider until you find the position with the least echo or distortion heard in your handset.

Note: This test is performed with the AastraLink echo canceller disabled, so you may not be able to fully remove all echo. If several settings balance equally, select the midpoint.

Use the slide bar to adjust the audio settings and reduce echo/distortion heard on the live phone call

IMPORTANT INFORMATION

Note: Before you begin using the Tuning Wizard, refer to the following information:

- Make sure you can directly access an Administrator IP phone.
- You will be asked to supply the destination phone number as part of the tuning procedure. Have this number handy.
- After you place the call from the Administrator IP phone, someone must answer the destination phone, and then "mute" the call. Unless the destination phone is co-located, ask another person to assist you with the Tuning Wizard procedure.

Use the following procedure to begin using the Tuning Wizard.

AastraLink Web UI

Step	Action
1	Select **Configuration->Regional Settings**
2	Click on the **<Tuning Wizard>** button, located at the bottom of the menu. The Tuning Wizard launches and the welcome screen appears. Click **<Next>** to begin using the Tuning Wizard.
3	Specify settings for the following parameters, then click **<Next>**: • **Connection Type** Specify which type of phone lines connect to the AastraLink (and you are currently tuning) — either *PBX* (private network) or *PSTN* (public switched telephone network). • **Line Boost** Specify the audio boost level used on these lines, as *Standard, Full, or Extended.* • **Number to Dial** Enter the destination phone number that the Tuning Wizard dials as part of the tuning procedure.

AastraLink Web UI

Step	Action
4	Follow the Tuning Wizard online instructions until the process is complete. **Important Notes:** 1. The destination phone number MUST be an analogue line on the same central office switch as the line connected to the FXO line 1. - Remove PSTN line 2 from the VNX and plug it into a POTS phone instead; then perform the tuning wizard and enter the number of line 2. The call is placed outbound on line 1. - Answer the POTS phone and then mute it. - Speak the Harvard phonetically balanced sentences and listen for hybrid distortion artifacts such as echo, clipping, sibilance, and overall loudness/noise. - Adjust the slider until the optimal position is met. 2. Because the echo canceller is disabled during this test, you should not be concerned about excessively poor quality of the voice; after completing the wizard, echo canceller is re-enabled and converges to remove any residual echo caused by imprecisely balanced line; the user is aiming for 'best effort' not 'perfect' during the wizard, the DSP algorithms will do the rest. **Note:** Higher line boost levels are only used to avoid problems with sibilance, clipping, or overdrive on the line due to dynamic range compression. The signal to noise ratio degrades with higher boost levels, so the lowest acceptable of the three choices should be used (i.e. standard) unless such problems are encountered.
5	When you are finished, click **<Exit>** to save your changes and exit the Tuning Wizard. **Note:** If you do not complete the tuning wizard (i.e. the Web UI times out), then the echo canceller may not be re-enabled. It can be manually re-enabled at the location *Configuration->System->Regional Settings* if required. The Regional Settings menu updates to reflect the Connection Type, Line Boost Level, and Line Profile that you specified during the Tuning Wizard procedure. You can repeat the Tuning Wizard procedure as necessary to refine the audio quality on your phone lines.

Chapter 5
Maintaining the AastraLink Pro 160

About this Chapter

Introduction

This chapter describes how to maintain the AastraLink Pro 160.

Topics

This chapter covers the following topics:

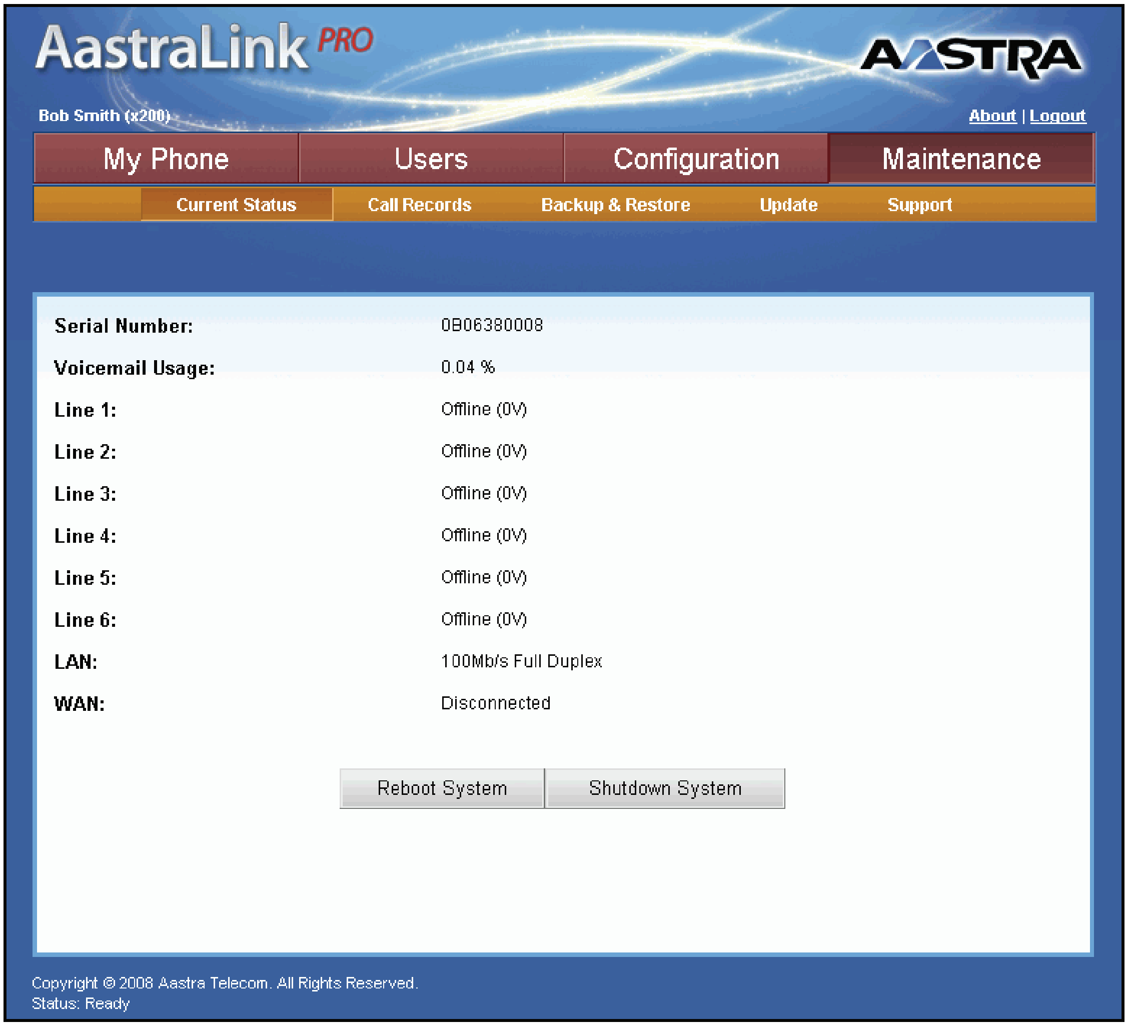
Topic	**Page**
Accessing the Maintenance Menu	page 5-3
Viewing the Current System Status	page 5-4
Managing Call Detail Records (CDR reports)	page 5-5
Sorting CDR Columns	page 5-6
Viewing Call Detail Records	page 5-8
Downloading CDR Reports	page 5-8
Performing AastraLink Backup and Restore Tasks	page 5-9
Backup and Restore Guidelines	page 5-10
Backing Up AastraLink System Software	page 5-11
Restoring the AastraLink Configuration Database and Voicemail	page 5-12
Updating AastraLink System Software	page 5-13
Automatic Updates	page 5-14
Manual Updates	page 5-16

About this Chapter

Topic	Page
Support Information	page 5-19
Send Email to Aastra Support with Debug Reports	page 5-19
Send General Email to Aastra Support	page 5-22

Accessing the Maintenance Menu

You access all system maintenance and upgrade options for the AastraLink Pro 160 from the **Maintenance** menu (Figure 5-1).


AastraLink PRO
AASTRA
Bob Smith (x200)
About | Logout
My Phone
Users
Configuration
Maintenance
Current Status
Call Records
Backup & Restore
Update
Support
Reboot System
Shutdown System

Serial Number:	0B06380008
Voicemail Usage:	0.04 %
Line 1:	Offline (0V)
Line 2:	Offline (0V)
Line 3:	Offline (0V)
Line 4:	Offline (0V)
Line 5:	Offline (0V)
Line 6:	Offline (0V)
LAN:	100Mb/s Full Duplex
WAN:	Disconnected

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Status: Ready

Figure 5-1. AastraLink Pro 160 Web UI Maintenance Menu

Viewing the Current System Status

You view the current system status for the AastraLink Pro160 from the **Maintenance->Current Status** menu (Figure 5-1)**.**

The current status menu contains the following information about the AastraLink Pro 160:

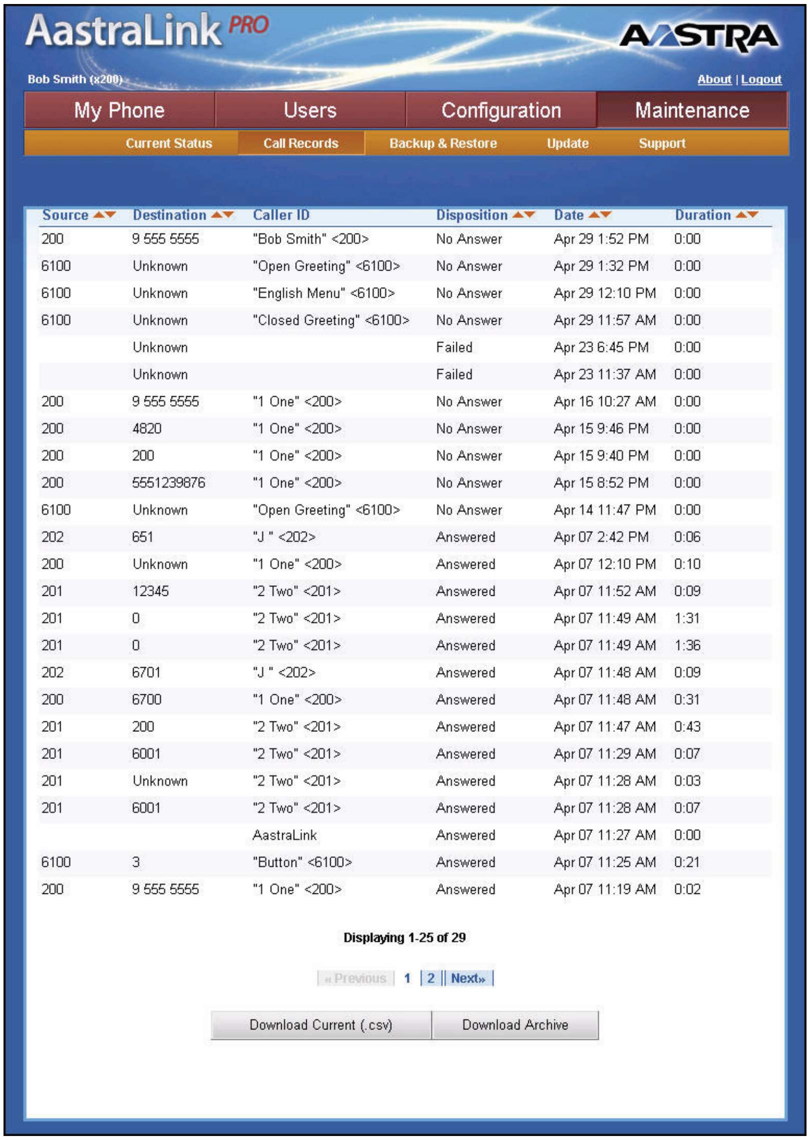
- Serial Number of the AastraLink Pro 160
- Percent of Voicemail usage
- Line 1 through Line 6 shows the status of each FXO line.
  - If the line is connected and receiving voltage from the telephone network, the status is "Available."
  - If the line is disconnected, the status is "Offline."
  - If the line is off-hook, the status is "In Use."
- Link connection mode and speed for the LAN and WAN. Displays "**Disconnected**" if no LAN or WAN connection available.

The Current Status screen also allows you to reboot the AastraLink Pro system and all of the connected phones, or shut down the entire system.

Managing Call Detail Records (CDR reports)

You view the Call Detail Record (CDR) history for the AastraLink Pro 160 from the **Maintenance->CDR Reports** menu (Figure 5-2).

The CDR logs include all regular calls, feature activations, and internal calls.


AastraLink PRO
AASTRA
Bob Smith (x200)
About | Logout
My Phone
Users
Configuration
Maintenance
Current Status
Call Records
Backup & Restore
Update
Support
« Previous
1
2
Next»
Download Current (.csv)
Download Archive

Source	Destination	Caller ID	Disposition	Date	Duration
200	9 555 5555	"Bob Smith" <200>	No Answer	Apr 29 1:52 PM	0:00
6100	Unknown	"Open Greeting" <6100>	No Answer	Apr 29 1:32 PM	0:00
6100	Unknown	"English Menu" <6100>	No Answer	Apr 29 12:10 PM	0:00
6100	Unknown	"Closed Greeting" <6100>	No Answer	Apr 29 11:57 AM	0:00
	Unknown		Failed	Apr 23 6:45 PM	0:00
	Unknown		Failed	Apr 23 11:37 AM	0:00
200	9 555 5555	"1 One" <200>	No Answer	Apr 16 10:27 AM	0:00
200	4820	"1 One" <200>	No Answer	Apr 15 9:46 PM	0:00
200	200	"1 One" <200>	No Answer	Apr 15 9:40 PM	0:00
200	5551239876	"1 One" <200>	No Answer	Apr 15 8:52 PM	0:00
6100	Unknown	"Open Greeting" <6100>	No Answer	Apr 14 11:47 PM	0:00
202	651	"J " <202>	Answered	Apr 07 2:42 PM	0:06
200	Unknown	"1 One" <200>	Answered	Apr 07 12:10 PM	0:10
201	12345	"2 Two" <201>	Answered	Apr 07 11:52 AM	0:09
201	0	"2 Two" <201>	Answered	Apr 07 11:49 AM	1:31
201	0	"2 Two" <201>	Answered	Apr 07 11:49 AM	1:36
202	6701	"J " <202>	Answered	Apr 07 11:48 AM	0:09
200	6700	"1 One" <200>	Answered	Apr 07 11:48 AM	0:31
201	200	"2 Two" <201>	Answered	Apr 07 11:47 AM	0:43
201	6001	"2 Two" <201>	Answered	Apr 07 11:29 AM	0:07
201	Unknown	"2 Two" <201>	Answered	Apr 07 11:28 AM	0:03
201	6001	"2 Two" <201>	Answered	Apr 07 11:28 AM	0:07
		AastraLink	Answered	Apr 07 11:27 AM	0:00
6100	3	"Button" <6100>	Answered	Apr 07 11:25 AM	0:21
200	9 555 5555	"1 One" <200>	Answered	Apr 07 11:19 AM	0:02

Displaying 1-25 of 29

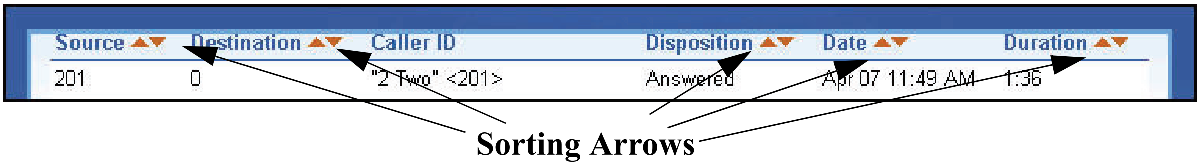
Figure 5-2. Call Records Menu

The following table described the information in each call detail record.

Column	Description
Source	Source directory number
Destination	Destination directory number (in some cases, includes line type, i.e., SIP)
Caller ID	Calling name of the originator (if known)
Disposition	Result of the call, or the feature method used (i.e., whether the call was answered, not answered, busy, or if the call failed).
Date	Date of the call
Duration	Amount of time that lapsed from when the call was dialed to when the call was terminated.

Sorting CDR Columns

In the Call Detail Record report, you can sort each column using the up and down arrows at the top of each column.



Source ▲▼	Destination ▲▼	Caller ID	Disposition ▲▼	Date ▲▼	Duration ▲▼
201	0	"2 Two" <201>	Answered	Apr 07 11:49 AM	1:36

The following table describes the sorting process for each column.

Column	Sort Process	
	UP Arrow	**DOWN Arrow**
Source	Sorts in ascending order. For example: UnKnown <Blank> 200 201 202	Sorts in descending order. For example: 202 201 200 <Blank> Unknown

Column	Sort Process	
Destination	Sorts in ascending order. For example: Unknown 205 206 302 3345454 4443567	Sorts in descending order. For example: 4443567 3345454 302 206 205 Unknown
Caller ID	No sorting; the items in this column stay with each record as you sort.	
Disposition	Sorts by: Answered, Failed, No Answer	Sorts by: No Answer, Failed, Answered
Date	Sorts in ascending order. For example: Apr 7 10:51 AM Apr 7 11:42 AM May 4 2:30 PM	Sorts in descending order: For example: May 4 2:30 PM Apr 7 11:42 AM Apr 7 10:51 AM
Duration	Sorts in ascending order. For example: 00:00 00:00 00:32 01:43	Sorts in descending order. For example: 01:43 00:32 00:00 00:00

Note:

1.When sorting in the CDR report, the sort uses data from the current report that may appear on more than one page. For example, if a CDR report is large enough to appear on four pages, the data on all four pages is sorted when you click on the UP and DOWN sort arrows.

2.Call logs cannot manually be deleted, but are automatically expired from the CompactFlash after log rotate limits are reached. Default limits for CDR logs are to check dial and rotate after 200kb file size is reached, at which point logging resumes in a new blank log file.

Viewing Call Detail Records

Use the following procedure to view call detail records.

AastraLink Web UI

Step	Action
1	Select **Maintenance->Call Records.**
2	View the log as applicable. To sort the report in ascending or descending order, click ▲▼ next to the field in the Call Records header row.

Downloading CDR Reports

You can also download the current Call Detail Record you are viewing, to your PC or server, or download an entire archived set of Call Detail Records.

To download the current contents of the CDR report and save it locally on your computer, click **<Download Current>.** This option saves the file as **cdr_logs.csv**.

To download an archived set of CDR reports and save it locally on your computer or server, click **<Download Archive>**. This option saves a compressed file as **cdr_archive.tar.gz.**

You can import this data into software applications, such as a separate database, spreadsheet, or other billing mediation application.

Performing AastraLink Backup and Restore Tasks

You can save the current AastraLink Pro 160 system configuration database into a file, and download it to your PC for secure storage, from the **Maintenance->Backup & Restore** menu (Figure 5-3).

The backup file contains all voicemail and configuration information for the AastraLink Pro 160 system. The backup file is encrypted to prevent exposure of personal information.

In addition to backing up your AastraLink Pro, you can restore a previously backed up file onto the AastraLink Pro 160, in order to recover its original operating state.

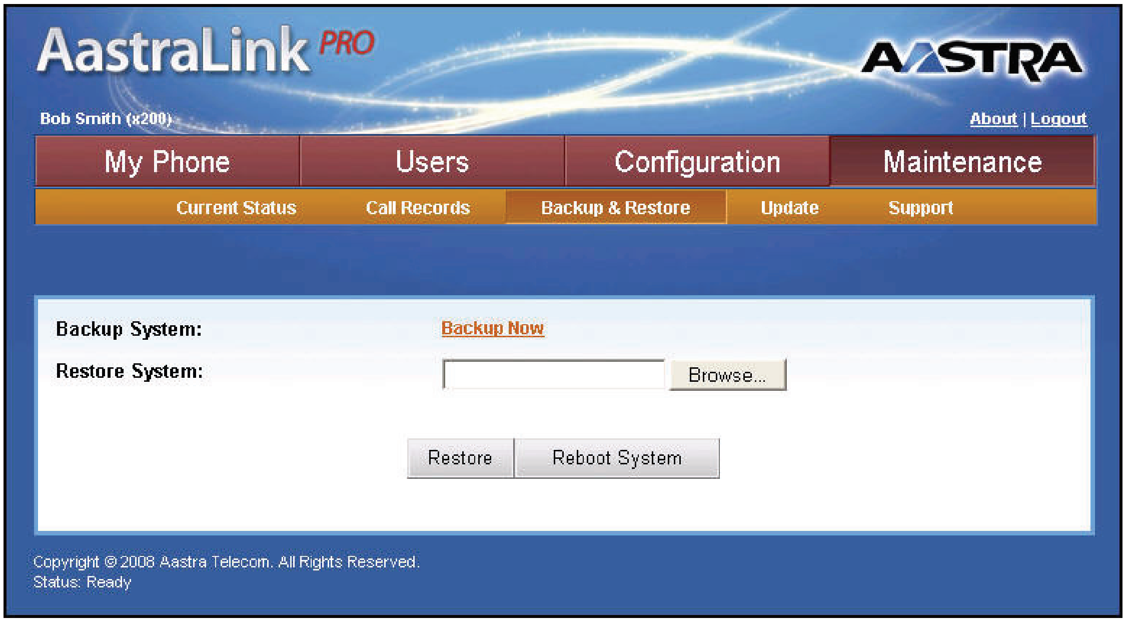

AastraLink PRO
AASTRA
Bob Smith (x200)
About | Logout
My Phone
Users
Configuration
Maintenance
Current Status
Call Records
Backup & Restore
Update
Support
Backup System:
Backup Now
Restore System:
Browse...
Restore
Reboot System
Copyright © 2008 Aastra Telecom. All Rights Reserved.
Status: Ready

Figure 5-3. Backup and Restore Menu

This Backup and Restore screen also allows you to reboot the system if required using the **<Reboot System>** button.

Backup and Restore Guidelines

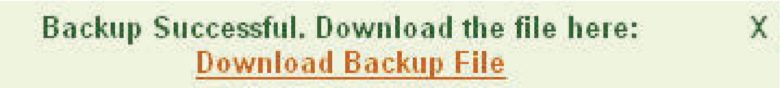
Review the following information and guidelines before performing AastraLink backup and restore operations:

- To ensure that the confidentiality of voicemails is preserved, backup data is stored in the compressed and encrypted “AastraLink Backup File” (*.abf*) format.
- When a large amount of voicemail exists, the backup and restore process can take an hour or more to complete.
- When an *.abf* file is restored to the AastraLink Pro, existing configuration data for all users is replaced by the copy from the backup file. After uploading the backup file for restoration, the AastraLink must reboot to extract and apply the saved settings. During this process, a factory-default occurs, erasing the current configuration and replacing it with the copy from the backup file.
- After restoring from a backup, reboot all user phones to make certain that the AastraLink and the phones are in a consistent state. This action also automatically adds any missing phones to the corporate directory.

Backing Up AastraLink System Software

Use the following procedure to back up the AastraLink System Software.

AastraLink Web UI

Step	Action
1	Select **Maintenance->Backup & Restore**
2	To start the backup process for the AastraLink Pro 160, click **<Backup Now>** The backup process begins and runs as a background task. Depending on the number configured extensions (and amount of stored voicemail), this could take up to 30 minutes. When the backup file is ready, the Web UI display the following menu:  Backup Successful. Download the file here: X Download Backup File
3	Click **<Download Backup File>**, then use your browser's *"Save As"* feature to download the backup file and save it to your local PC. The backup file format is *".abf"*

Restoring the AastraLink Configuration Database and Voicemail

Use the following procedure to restore a previously saved version of the AastraLink configuration database and voicemail onto the device.

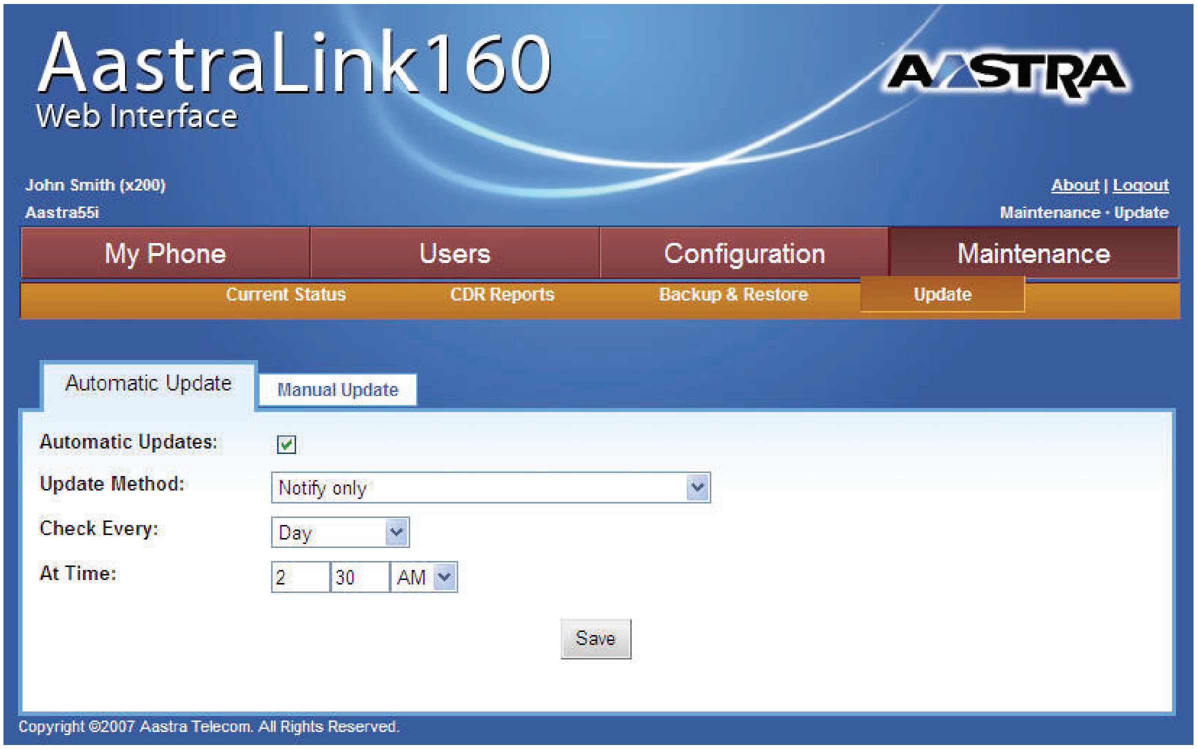
Caution: Restoring from a backup will overwrite existing configuration and voicemail data.

AastraLink Web UI

Step	Action
1	Select **Maintenance->Backup & Restore**
2	Click **<Browse>,** then select a previously saved *".abf"* file.
3	Click **<Restore>** to initiate the upload of the *.abf* file to the AastraLink Pro 160.
4	Once the upload is complete, click **<Yes>** to reboot the AastraLink Pro 160 and reload the new database. Once the reboot is complete, the LED light on the front of the AastraLink Pro 160 device flashes green. You can then log into the AastraLink Pro 160.

Updating AastraLink System Software

You can apply new AastraLink system software to the unit from the **Maintenance->Update** menu (Figure 5-4).


AastraLink160
Web Interface
AASTRA
John Smith (x200)
Aastra55i
About | Logout
Maintenance · Update
My Phone
Users
Configuration
Maintenance
Current Status
CDR Reports
Backup & Restore
Update
Automatic Update
Manual Update
Save
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Automatic Updates: ☑
Update Method: Notify only
Check Every: Day
At Time: 2 30 AM

Figure 5-4. **Update Menu**

AastraLink software updates use the *".dra"* file extension, and are available from the Aastra customer support web site. Commonly used update files include:

- *vnx.dra*: Contains new AastraLink system software for the CompactFlash.
- *obf.dra*: Contains new AastraLink system firmware for the onboard flash.
- *ipp.dra*: Contains new Aastra IP phone firmware.

Note: For a link to the Aastra Support web site, click the “About” link in the upper right corner of the screen. For more information about the “About” screen, see “Send General Email to Aastra Support” on page 5-22.

There are two ways to update your system software:

- **Automatic update:** Use if you want to specify a date/time for automatic updates to occur. This method also allows you to specify these options:
  - Notify you when a new image is available.
  - Download the latest system software file, but do not install it.
  - Download the latest system software and install it (installs the software and reboots the AastraLink) automatically.
- **Manual Update:** Use if you want to manually update the AastraLink. You can either:
  - Check the Aastra support website for updates, and if available, download the latest system software file.
  - Update the AastraLink using a system software file stored locally.

Note: Aastra recommends creating a backup file of your current AastraLink Pro 160 system software *before* you perform the upgrade procedure described in this section. Some system updates may result in the loss of configuration or voicemail messages.

Automatic Updates

Use the following procedure to specify the parameters used to automatically update your AastraLink System Software.

AastraLink Web UI

Step	Action
1	Select **Maintenance->Update->Automatic Update**
2	Click on the **Automatic Updates** check box to select it.

AastraLink Web UI

Step	Action
3	Choose one of the following Update Methods: • **Notify only.** Select if you want the AastraLink to notify you using an email message when a new image is available. • **Download but don't install**. Select if you want the AastraLink to download the latest system software file, but not install it. • **Install (reboots system when updates are found)**. Select if you want the AastraLink to download the latest system software when it is available and install it (reboots the AastraLink) automatically.
4	In the **Check Every** field, specify how often the AastraLink should check the Aastra support website for updates.
5	In the **At Time** field(s), specify the time when the AastraLink should check for updates.
6	Click <**Save>** to save your changes.

Manual Updates

Use the following procedure to manually update your AastraLink System Software.

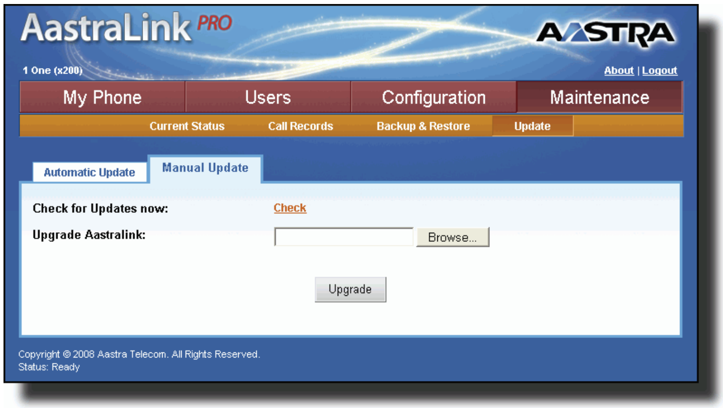
AastraLink Web UI

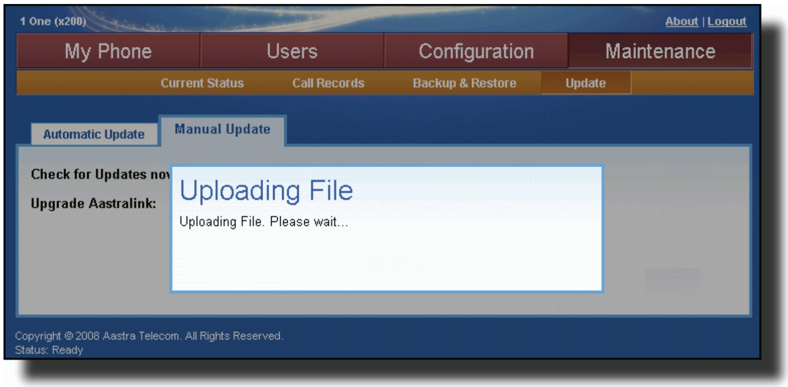
Step	Action
1	Select **Maintenance->Update->Manual Update**
2	Choose one of the following options: • **Check for Updates:** Select if you want the AastraLink to check the Aastra support website for updates. The AastraLink contacts the Aastra support website to check if a newer software version of any of the three *.dra* files is available. A dialog box appears, showing the number of updates available (or none if the AastraLink is already using the latest software). If an update is available, you can choose to immediately download and apply the update. • **Upgrade AastraLink:** Select if you want to locate an AastraLink System Software file of type *.dra* that you stored locally on your PC or server. Use the Browse button to locate the *. dra* file on your PC, then click **<Upgrade>** to begin downloading the file.
3	If you apply an updated *.dra* file, Click **<Reboot System>** to reboot the AastraLink Pro 160 using the updated AastraLink software. Your AastraLink reboots using the latest software image.

IMPORTANT NOTES

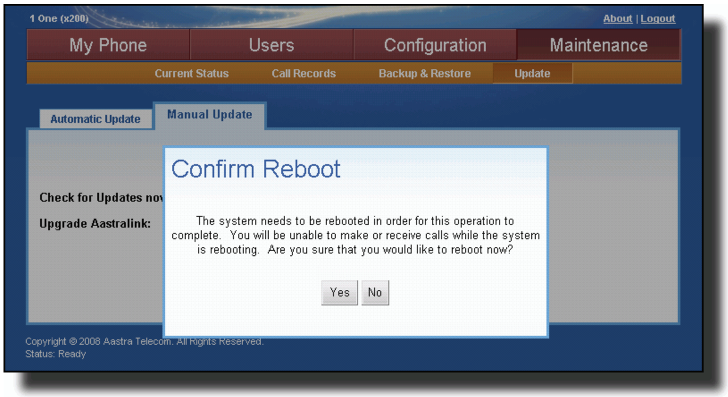
During the AastraLink Pro software update process, the Administrator must press the REBOOT button after the upgrade is successful.

The Web UI displays the following message after pressing the REBOOT button: "*System is rebooting. Please login after there is a flashing green light on the front of the AastraLink.”*


AastraLink PRO
AASTRA
1 One (x200)
About | Logout
My Phone
Users
Configuration
Maintenance
Current Status
Call Records
Backup & Restore
Update
Automatic Update
Manual Update
Check for Updates now:
Check
Upgrade Aastralink:
Browse...
Upgrade
Copyright © 2008 Aastra Telecom. All Rights Reserved.
Status: Ready

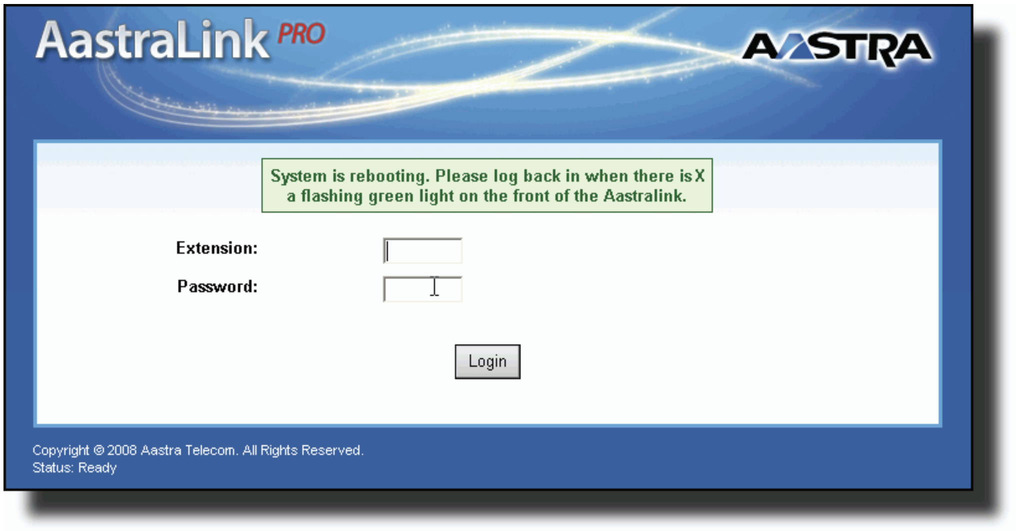

1 One (x200)
About | Logout
My Phone
Users
Configuration
Maintenance
Current Status
Call Records
Backup & Restore
Update
Automatic Update
Manual Update
Check for Updates no
Upgrade Aastralink:
Uploading File
Copyright © 2008 Aastra Telecom. All Rights Reserved.
Status: Ready

Uploading File. Please wait...


1 One (x200)
About | Logout
My Phone
Users
Configuration
Maintenance
Current Status
Call Records
Backup & Restore
Update
Automatic Update
Manual Update
Check for Updates no
Upgrade Aastralink:
Confirm Reboot
Yes
No
Copyright © 2008 Aastra Telecom. All Rights Reserved.
Status: Ready

The system needs to be rebooted in order for this operation to complete. You will be unable to make or receive calls while the system is rebooting. Are you sure that you would like to reboot now?

The User must watch for the flashing green LED on the front of the AastraLink Pro hardware before attempting to re-login to the AastraLink Web UI. If the User attempts to login too soon, the message "*Warning: System is in an upgrade state. Logins have been disabled.*" The status of the upgrade process also displays at the bottom left corner of the login dialog so the Administrator knows when the upgrade is complete.

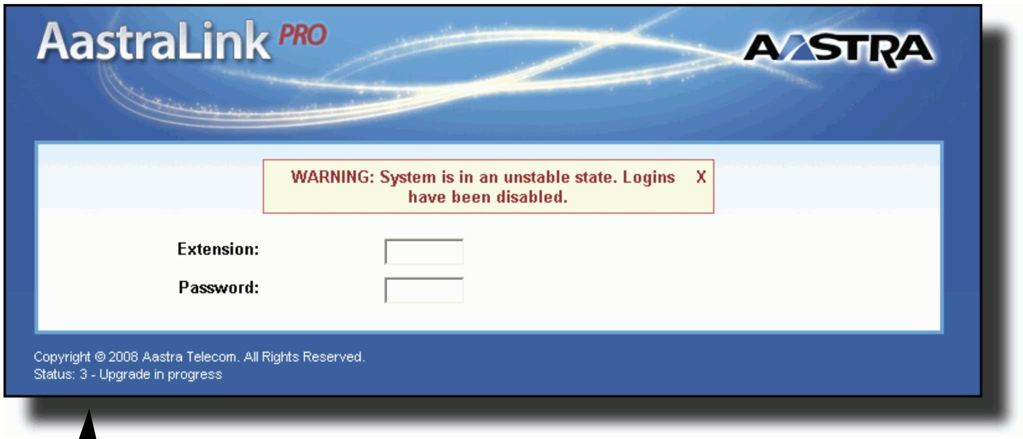

AastraLink PRO
AASTRA

System is rebooting. Please log back in when there is a flashing green light on the front of the Aastralink.

X
Extension:
Password:
Login

Copyright © 2008 Aastra Telecom. All Rights Reserved.
Status: Ready

System Rebooting Message


AastraLink PRO
AASTRA

WARNING: System is in an unstable state. Logins have been disabled.

X
Extension:
Password:

Copyright © 2008 Aastra Telecom. All Rights Reserved.
Status: 3 - Upgrade in progress

Warning Message if Login Attempt Too Soon

AastraLink Status Display

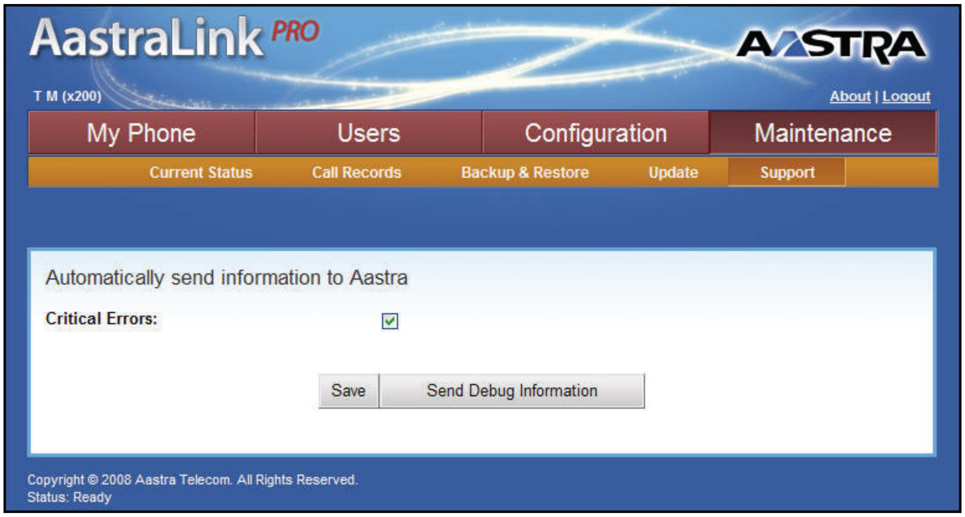
Support Information

Send Email to Aastra Support with Debug Reports

A feature of the AastraLink Pro 160 Web UI software allows you to send debug information about your AastraLink Pro to Technical Support at Aastra Telecom. You have the option of selecting whether you want to automatically send the information or send it manually when required.

Note: Whether you send debug information automatically or manually, both methods require correctly configured SMTP mail before sending the outbound reports to Aastra.

You send debug reports from the **Maintenance->Support** Menu.


AastraLink PRO
AASTRA
T M (x200)
About | Logout
My Phone
Users
Configuration
Maintenance
Current Status
Call Records
Backup & Restore
Update
Support
Save
Send Debug Information

Automatically send information to Aastra

Critical Errors: ☑

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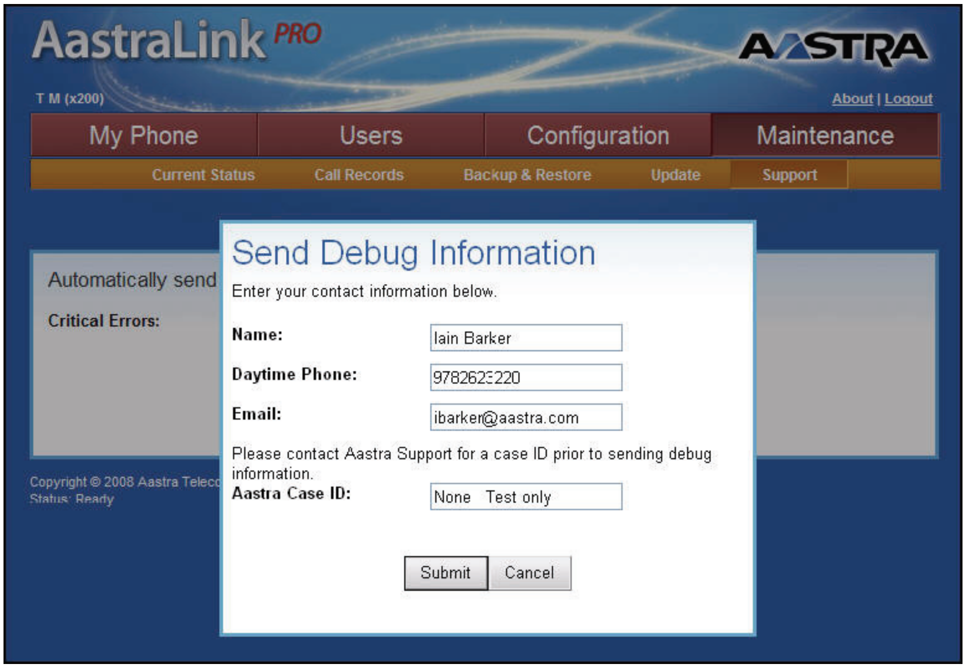
Status: Ready

This feature allows the administrator to send critical error debug logs and configuration logs to Aastra Support to aid in troubleshooting tasks. Enabling the "**Critical Errors**" field results in automatic crash reporting to Aastra support but with no personally identifiable information other than the serial number and IP address of the reporting system.

Aastra recommends that all users enable the "**Critical Errors**" reporting as soon as they have configured SMTP email transport, so that Aastra can be made aware of any crash trends and provide pro-active support.

Clicking **<Send Debug Information>** displays the following screen.

Note: The **<Send Debug Information>** button may include personally identifiable information, such as call logs and account details (passwords, etc.). However, the file attached to the email is encrypted to ensure that only Aastra support personnel have access to it.


AastraLink PRO
AASTRA
T M (x200)
About | Logout
My Phone
Users
Configuration
Maintenance
Current Status
Call Records
Backup & Restore
Update
Support
Automatically send
Critical Errors:
Copyright © 2008 Aastra Teleco
Status: Ready
Submit
Cancel

Send Debug Information

Enter your contact information below.

Name: Iain Barker

Daytime Phone: 9782623220

Email: ibarker@aastra.com

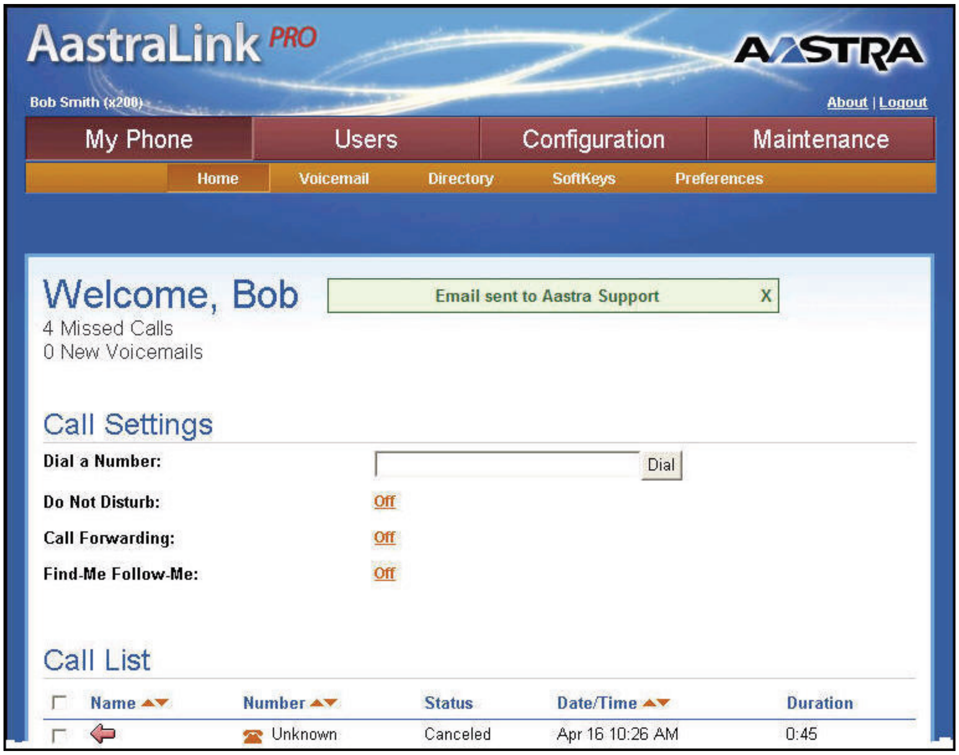
Please contact Aastra Support for a case ID prior to sending debug information.

Aastra Case ID: None Test only

Note: The AastraLink software requires you to enter an Aastra Case ID before sending any debug information. Contact Aastra Support prior to using this support feature.

The Send Debug Information screen allows the administrator to enter the name, daytime phone, and email of the person sending the report. An Aastra Case ID must also be specified. (Contact Aastra Support prior to sending the debug notification.)

After submitting the debug notification to Aastra, the following message displays.


AastraLink PRO
AASTRA
Bob Smith (x200)
About | Logout
My Phone
Users
Configuration
Maintenance
Home
Voicemail
Directory
SoftKeys
Preferences

Welcome, Bob

Email sent to Aastra Support X

4 Missed Calls
0 New Voicemails

Call Settings

Dial a Number: Dial

Do Not Disturb: Off

Call Forwarding: Off

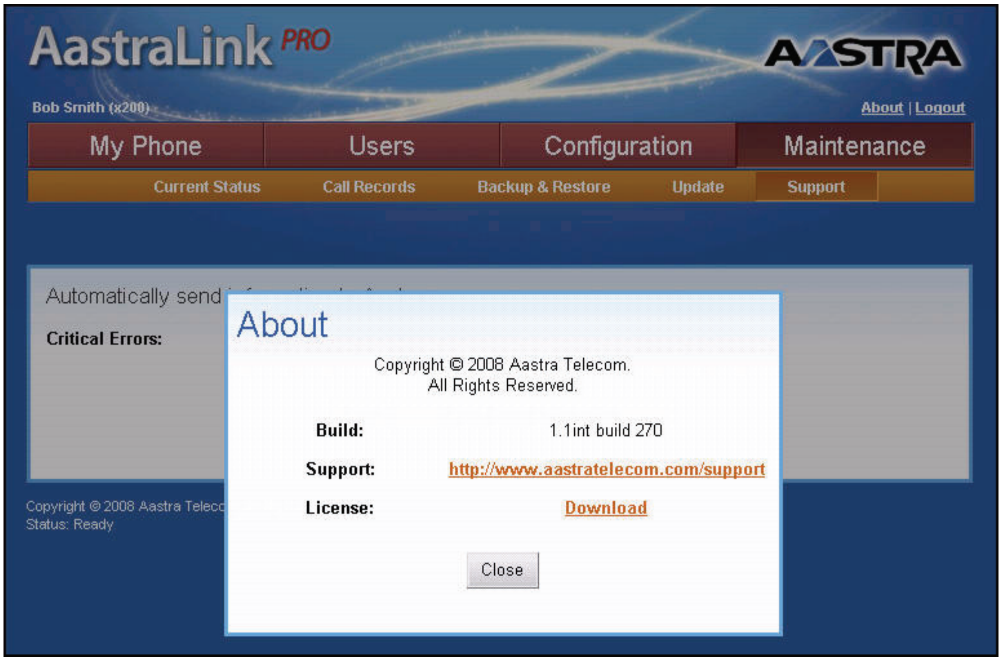
Find-Me Follow-Me: Off

Call List

☐	Name	Number	Status	Date/Time	Duration
☐	⇦	☎ Unknown	Canceled	Apr 16 10:26 AM	0:45

Send General Email to Aastra Support

You can send general email, questions, etc. to Aastra Support using the “**Support**” link on the “**About**” screen. In an Administrator session, this screen displays the AastraLink Pro software build number, license download link, and a link to the Aastra Telecom Support Web page.


AastraLink PRO
AASTRA
Bob Smith (x200)
About | Logout
My Phone
Users
Configuration
Maintenance
Current Status
Call Records
Backup & Restore
Update
Support
Automatically send
Critical Errors:
Copyright © 2008 Aastra Teleco
Status: Ready
About
Copyright © 2008 Aastra Telecom.
All Rights Reserved.
Close

Build: 1.1int build 270
Support: http://www.aastratelecom.com/support
License: Download

Field	Procedure
Build	Displays the current release and build number of your AastraLink Pro 160 software. This field is view-only.
Support	Click the specified link to automatically open a browser window and display the Aastra Support page. From this page, you can: • **Contact Aastra Technical Support** • **Download product documentation** • **View Frequently Asked Question (FAQs)**
License	Click **<Download>** to immediately download the current AastraLink Pro 160 License file (in PDF format) to your PC screen for viewing.

Chapter 6
AastraLink FAQs

This chapter describes frequently asked questions (FAQs) about installing and using the AastraLink Pro 160 in your IP phone network.

Topics

This chapter covers the following topics:

Topic	Page
How Does Network Addressing Work?	page 6-2
How Does IP Phone Auto-Configuration Work?	page 6-2
What is the Difference Between the Administrator Phone and User Phones?	page 6-3
Do I Ever Need to Re-Register IP Phones?	page 6-3
Can I Access My IP Phone Network From a Remote Office?	page 6-3
How Do I Assign An IP Phone To A Different User?	page 6-4
What Are Softkeys and How Do They Work?	page 6-4
How Do I Obtain the IP Address Assigned to the AastraLink Pro 160?	page 6-8
Why Do My IP Phone Screens Look Different?	page 6-9
Why Does The Web UI Occasionally Time-out?	page 6-9
How Do I Maximize System Performance?	page 6-9
Does This Guide Describe How To Operate My IP Phone?	page 6-10

How Does Network Addressing Work?

The first time an AastraLink Pro 160 starts up, it attempts to use DHCP to obtain an IP address from a server on the network.

If that fails, the AastraLink Pro 160 then uses ZeroConf to assign itself an IP address within the range 169.254/16 (excepting the first and last 256 addresses in this range, which are reserved). The AastraLink Pro 160 uses its MAC address as a basis, then selects a random IP Address within the valid range. The AastraLink Pro 160 sends out ARP requests to see if the IP Address is already assigned to another device on the network. If so, the AastraLink Pro 160 assigns itself another random IP Address until it finds a free address.

Once the AastraLink Pro 160 is up and running, the administrator can use the Web UI to assign a static IP address to the device. The next time the AastraLink Pro 160 starts up, it uses the static address you assigned.

If the AastraLink Pro 160 device's public IP Address changes, the device sends an email message to notify the administrator.

How Does IP Phone Auto-Configuration Work?

When an Aastra IP phone starts up on your IP phone network, the phone uses multicast DNS to automatically discover the presence of an AastraLink Pro 160 device on the LAN. Once the AastraLink is discovered, the phone then obtains its configuration file from the device.

Note: Multicast DNS may not traverse between switched network segments (due to spanning tree non-convergence) or across subnet routers; therefore, it may be necessary to connect IP phones to the same Ethernet segment or IP Subnet as the AastraLink, before they can register to the AastraLink Pro.

If you are registering a new IP phone with the AastraLink, the IP Phone UI prompts you to specify the user's first name, last name, and email address. The AastraLink Pro 160 then automatically assigns the next free extension to the IP phone.

If there are multiple AastraLinks present on the LAN, then the Aastra IP phone UI displays the list of AastraLinks. You then select which AastraLink the phone should use to obtain its configuration file.

As administrator, you have the option to control new phone registration on your network. That is, if you wish, you can use the Web UI to restrict new phones from registering.

What is the Difference Between the Administrator Phone and User Phones?

The first IP phone you register with the AastraLink Pro 160 becomes the administrator phone. The administrator can configure and manage the AastraLink Pro 160, as well as configure all Aastra IP phones and user profiles on your network.

Once you register an administrator phone with the AastraLink, all other IP phones are registered as user phones. If you wish, you can assign administrator privileges to a user phone (s) using the Web UI.

Do I Ever Need to Re-Register IP Phones?

If an IP phone has been previously registered with the AastraLink Pro 160, it maintains the configuration information (user name/password/extension) even if it is removed, and then reinstalled, on the network.

Even if you set the IP phone back to its factory default settings, then all AastraLink registration information is erased locally from the phone; however when you re-connect the IP phone to the network, the IP phone re-discovers and re-registers with the AastraLink Pro 160 device.

Can I Access My IP Phone Network From a Remote Office?

Yes! The AastraLink provides remote office support. See Appendix A, “Remote Office Configuration of the IP Phone (Phone-Side)” for instructions on installing and registering remote user IP phones.

How Do I Assign An IP Phone To A Different User?

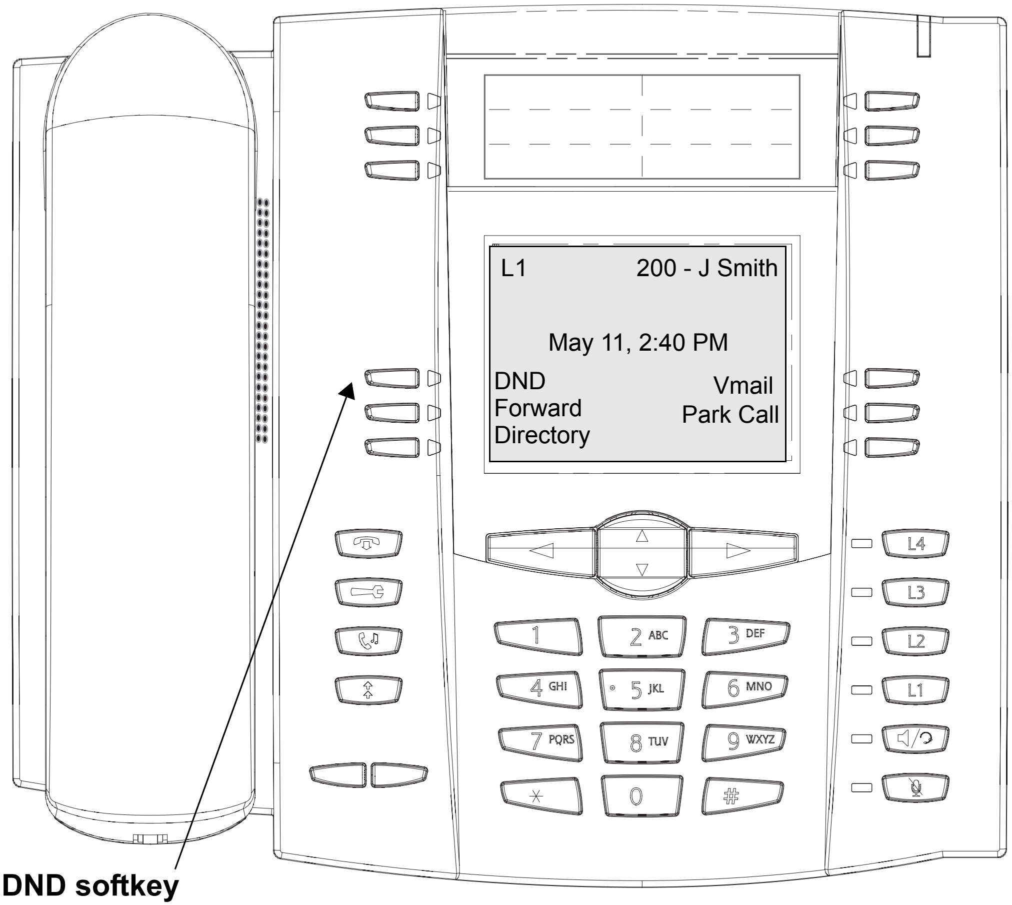
If an IP phone is already registered with the AastraLink device, and you want to reassign the IP phone to a different user, you must use the AastraLink Web UI to edit the user entry and change the name and extension number; or delete the old IP phone entry from the Users List, and add the new User phone reusing the previous extension if required.

What Are Softkeys and How Do They Work?

Softkeys function exactly like the hard keys on your IP phone. When you press a softkey, an action takes place. For example, when you press the DND softkey, you enable Do Not Disturb on your phone.

The difference between hard keys and softkeys is that softkeys are *programmable*. You can use the AastraLink Web UI to change a softkey so it performs a different function. For example, you can change a DND softkey to a Speeddial softkey, or one of 15 other softkey types available. You can also add or delete softkeys.

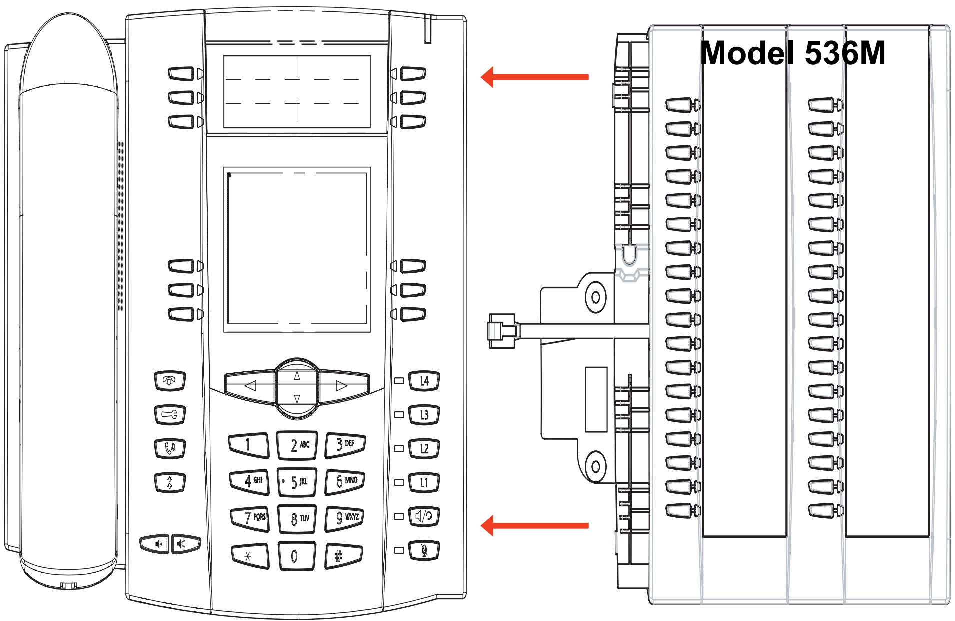
As administrator, you have the option to change the default softkey settings for the IP phones on your network. See "Default Softkeys (Users Menu)" on page 3-25 for instructions.


L1
200 - J Smith
May 11, 2:40 PM
DND
Forward
Directory
Vmail
Park Call
1
2 ABC
3 DEF
4 GHI
5 JKL
6 MNO
7 PQRS
8 TUV
9 WXYZ
*
0
#
L4
L3
L2
L1

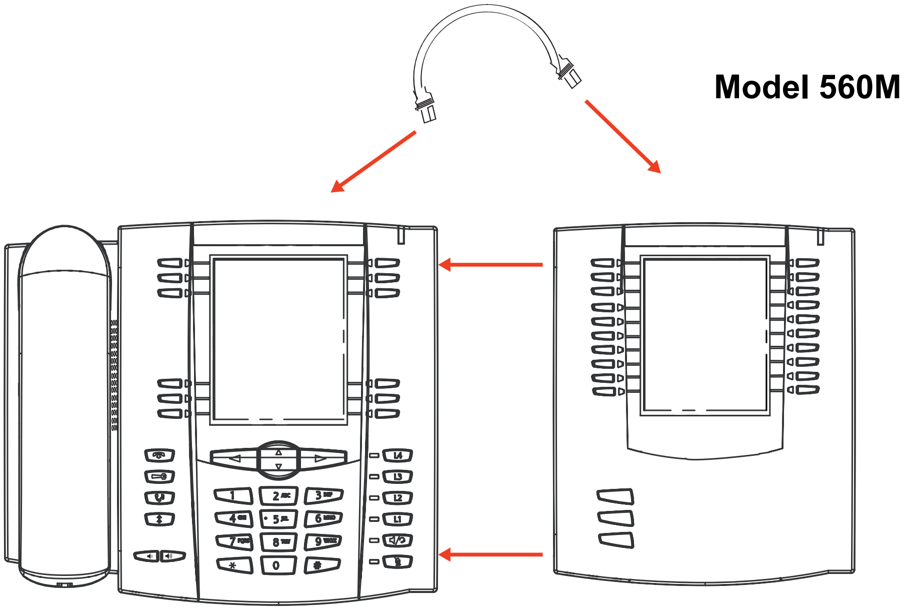
Press DND softkey to enable "Do Not Disturb" on this phone.

What are Expansion Modules?

The 5i Series Aastra IP SIP Phones offer expansion module units that can attach to the right side of the phone to provide additional softkeys. These expansion modules are called the 536M and the 560M.



For Phones 53i, 55i, 57i, and 57i CT



For Phones 55i, 57i and 57i CT

The 536M provides 36 additional softkeys and can attach to a 53i, 55i, 57i or 57i CT. The 560M provides 60 additional softkeys and can attach to a 55i, 57i, and 57i CT. You can configure the following softkey functions on the expansion modules:

- Busy Lamp Fields (BLFs) (maximum of 50)
- Speeddial

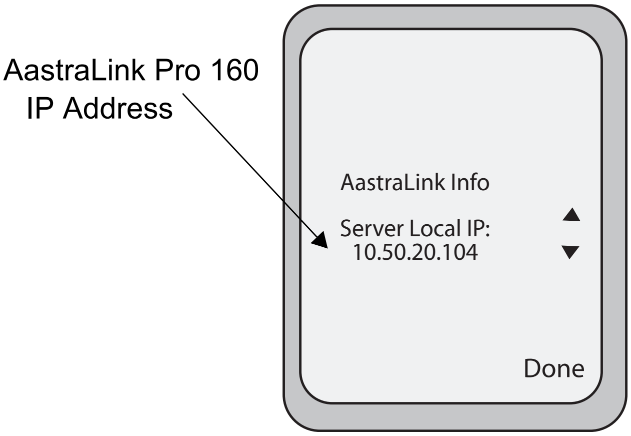
Each key provides an LED for indicating call status. The 536M provides a paper label for convenient key labeling, and the 560M provides an LCD for displaying key labeling.

Note: You use the AastraLink Web UI to configure the additional expansion module softkeys. For an Administrator phone, refer to Chapter 2, the section, "Softkeys for Expansion Modules (Administrator Phone)" on page 2-27 for more information. For a User phone, refer to Chapter 3, the section, "Softkeys for Expansion Modules (User Phone)" on page 35.

How Do I Obtain the IP Address Assigned to the AastraLink Pro 160?

You can view the IP Address assigned to the AastraLink Pro 160 using your Aastra IP phone, and the procedure described below.

☎

Step	**Action**
1	Press Options key 🔧 on the phone key pad (or the **Options** key on the Aastra IP phone models 9143i, 9480i, and 9480i CT) to bring up the **Options** list.
2	Use △ and ▽ to scroll through the list key to select **Phone Status**, then press **<Show>**
3	Select **AastraLink Info**, then press **<Show>**
4	Press the down **<Arrow>** until the AastraLink IP Address menu appears (see below). In this example, the IP Address of the AastraLink Pro 160 is **10.50.20.104**  AastraLink Info Server Local IP: 10.50.20.104
5	Write down the IP Address of your AastraLink Pro 160. You need it to access the AastraLink Web UI.
6	Press **<Done>** to exit.

Why Do My IP Phone Screens Look Different?

If you install an AastraLink Pro 160 on your existing IP phone network, then you will notice some phone UI changes when you register the phones with the device.

Users who previously operated their IP phones in generic SIP mode should note the following information:

- Some menu options no longer appear on the Aastra IP phone UI, or are located on different screens. See the *AastraLink IP Phone User's Guide*.
- The Aastra IP phone UI displays several new menu options that apply to the AastraLink Pro 160 device itself.

Why Does The Web UI Occasionally Time-out?

For security reasons, the Web UI automatically logs a user off after 10 minutes of inactivity. The Web UI displays the login screen, along with a message informing you to log back in again. The Web UI may also temporarily disconnect the session if a temporary error occurs while connected to the AastraLink during processing of a data load or save operation; waiting a few minutes before logging back in and repeating the operation should generally be successful.

How Do I Maximize System Performance?

To maximize system performance, Aastra requires connecting the AastraLink to a full-duplex Ethernet device, such as a router or switch, rather than a half-duplex device such as a hub.

For example, if you are experiencing network problems such as garbled voice-path or Web UI time-outs, check the front LED on the AastraLink device. If it is slowly flashing red - about once per second - then the AastraLink is running normally, but in a degraded state. (a full-duplex network connection could not be negotiated). This causes timeouts, restricts the system capacity and/or causes problems with collisions or integrity of the network connection.

Does This Guide Describe How To Operate My IP Phone?

IP Phone operation - for example, how to use the buttons, softkeys, and hard keys on your model IP phone - is beyond the scope of this guide.

For instructions on operating Aastra IP phones, and using Aastra IP phone features, refer to the *AastraLink Pro 160 IP Phone User's Guide.*

Chapter 7
Troubleshooting Solutions

About this Chapter

Introduction

This chapter contains several trouble-shooting solutions for the AastraLink Pro 160. It describes how to interpret the LED status indicator located on the AastraLink front panel. It also describes how to reboot the AastraLink using either the Web UI, or the reset switch. In addition, it describes how to use the reset switch to restore original factory default settings on the device, in order to return it to an out-of-the-box state.

This chapter also describes how to use the AastraLink Recovery Mode UI to reinstall system software (that is, reprogram the CompactFlash card and/or the Onboard flash.) if it is ever required.

Topics

This chapter covers the following topics:

Topic	Page
Monitoring the AastraLink Status LED	page 7-3
Rebooting the AastraLink	page 7-4
Rebooting Using the Web UI	page 7-4
Rebooting Using the Reset Switch (Hard Reboot)	page 7-5
Rebooting Using the Web UI	page 7-4
Restoring AastraLink Factory Default Settings	page 7-6
What Happens if I Restore Factory Default Settings?	page 7-6

Topic	Page
Using the Reset Switch to Restore Factory Default Settings	page 7-6
What To Do After Restoring Factory Default Settings	page 7-7
Reinstalling System Software Using Recovery Mode	page 7-10
Automatic Recovery Mode	page 7-10
Manual Recovery Mode	page 7-11
Using The AastraLink Recovery Mode UI	page 7-12
Using AastraLink System and Phone Log Files	page 7-23

Monitoring the AastraLink Status LED

The LED on the front of the AastraLink Pro 160 indicates the current status of the device. The table below describes the LED variations.

LED Color	Meaning
Off	Power is off.
Steady Green	The AastraLink Pro 160 has successfully completed internal hardware diagnostic tests and is starting up.
Alternating Green/Red	The AastraLink Pro 160 is updating its onboard firmware, either because it is the first time you started up the device, or you just uploaded a new firmware image. **Warning**: Do not interrupt power during the system update, as system corruption can result.
Flashing Green	The AastraLink Pro 160 has successfully booted and is up and running, ready to process calls.
Alternating Green/Red/Off	The AastraLink Pro 160 is running in recovery mode. This sequence occurs if the last boot attempt failed. Try rebooting. If the problem persists, use the recovery procedure described in *"Reinstalling System Software Using Recovery Mode"* on page 7-10.
Flashing Red	The AastraLink Pro 160 is running in a degraded state: • Flash speed: *Slow* (approximately once per second) indicates that the AastraLink is running normally but that a full-duplex network connection could not be negotiated. This may limit the system capacity and/or cause problems with collisions or integrity of the network connection, leading to problems such as WebUI time-outs and garbled voice-path. Recommend connecting the AastraLink to a full-duplex Ethernet device, such as a router or switch, rather than a half-duplex device such as a hub. • Flash speed: *Fast* (approximately 5 times per second) indicates a system error occurred during startup; the AastraLink software was unable to initialize correctly. Contact Aastra support for assistance with diagnosing the problem.
Steady Red	Hardware self-test failure; system halted. Try rebooting. If LED remains steady red, contact Aastra Support.
Steady Amber	The Aastralink is in the process of restoring factory default settings.

Rebooting the AastraLink

This section describes how to reboot (restart) the AastraLink Pro 160.

You can reboot the AastraLink from the Web UI, or reboot it manually, using the reset switch located on the back of the device (next to the power receptacle, as shown on page 7-5).

Rebooting Using the Web UI

To reboot the AastraLink using the Web UI, do the following tasks:

AastraLink Web UI

Step	Action
1	Login to the AastraLink as Administrator.
2	Select **Maintenance->Current Status**
3	Click on the **<Reboot System>** button. The AastraLink reboots. Once the reboot is complete, you will need to login to the system again to access the AastraLink Web UI.

Rebooting Using the Reset Switch (Hard Reboot)

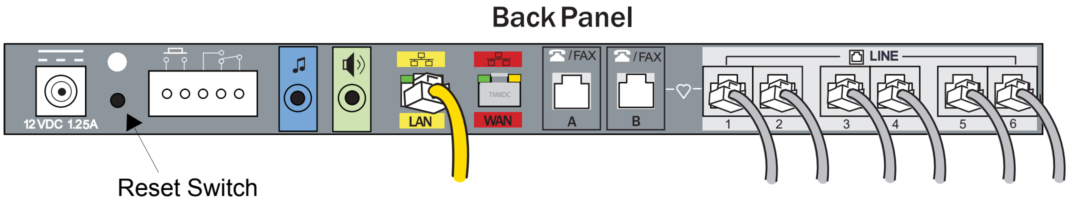
You can reboot the AastraLink device using the reset switch as long as the LED on the front of the Aastralink is in one of the following states:

- Flashing green
- Flashing red
- Steady red

See the LED monitoring table on page 7-3 for a description of each LED state.

Use the following procedure to reboot the AastraLink.

Manual Reboot Procedure

Step	Action
1	Locate the reset switch on the back of the device, as shown on the figure below.  Back Panel 12 VDC 1.25A LAN WAN /FAX /FAX A B LINE 1 2 3 4 5 6 Reset Switch
2	Use the end of a paperclip to press, and then immediately release, the reset switch. **IMPORTANT: DO NOT KEEP THE SWITCH PRESSED IN.** After five seconds, the LED turns red momentarily. This indicates that the AastraLink is resetting hardware. The AastraLink then begins its normal reboot process. The LED turns steady green as the device performs internal hardware diagnostic tests. Once tests are complete, the LED flashes green, indicating a successful reboot. The device is now up and running, ready to process calls.

Restoring AastraLink Factory Default Settings

What Happens if I Restore Factory Default Settings?

If you restore factory default settings on the AastraLink Pro 160, it reverts the device to its out-of-the-box state — just as it was shipped from the factory. Before you perform the instructions in this section, note that all configuration information, voicemail, and other files stored on the AastraLink's CompactFlash card are *erased* as a result of this process.

In addition, after you restore AastraLink factory default settings, you need to once again perform the initial startup sequence - that is, you need to register an Administrator phone with the device, and specify several start-up parameters - in order for the device to begin handling calls on your network.

Using the Reset Switch to Restore Factory Default Settings

Use the following procedure to restore factory default settings on the AastraLink Pro 160.

Factory Default Restoration Procedure

Step	Action
1	Locate the reset switch on the back of the device. The reset switch is located on the back of the AastraLink Pro 160 (next to the power receptacle) as shown on page 7-5.

Factory Default Restoration Procedure

Step	Action
2	Verify that the LED on the front of the device is flashing green, or flashing red.
3	Use the end of a paperclip to press, and then **hold** the reset switch (about 5 seconds) until the light turns amber. Release the reset switch. Once the LED turns amber, the AastraLink begins reverting to its factory default settings. The process takes up to 30 seconds to complete. During this process, all configuration information, voicemail, and other files stored on the AastraLink are erased. The AastraLink then begins its normal reboot process. The LED turns steady green as the device performs internal hardware diagnostic tests. Once tests are complete, the LED flashes green, indicating a successful reboot. The device is now up and running.

What To Do After Restoring Factory Default Settings

After restoring factory default settings on the AastraLink device, you must re-register an IP phone with the device, and use it to specify initial startup configuration parameters.

Note: The instructions in this section assume you have previously configured an Administrator IP phone on your AastraLink network. Therefore, this section does not describe initial IP phone setup or installation instructions. For this type of information, see the *AastraLink Administrator's QuickStart Guide.*

Use the following procedure to register an Administrator IP phone with the AastraLink Pro 160.

Administrator IP Phone Registration Procedure

Step	Action
1	Restart an Aastra IP phone. By default, the first IP phone you register with the device becomes the Administrator IP phone. When the phone starts up on your IP phone network, it automatically discovers the presence of an AastraLink Pro 160 device on the LAN. Once the AastraLink is discovered, the phone then obtains its configuration file from the device, and reboots. **Note:** For more information about Aastra IP phone auto-configuration, as well as other frequently asked questions, see AastraLink FAQs on page 6-1. For a complete description of the initial startup procedure — including phone installation and setup instructions — see the *AastraLink Pro 160 Administrator's Quickstart Guide*. Once the reboot completes, the IP phone UI prompts you to begin the registration procedure, as described in Step 2.
2	Choose the system language used on your AastraLink network, then press **<Select>**.
3	Choose the country where the AastraLink resides, then press **<Select>.**
4	Choose the time zone for the AastraLink to use, then press **<Select>.**
5	Do one of the following actions: • If the Internet is available on your network, choose "Automatic" then press **<Select>** to allow the AastraLink Pro 160 to set the local Date/Time for your phone • if the Internet is not available, choose "Manual" then press **<Select>** and follow the Phone UI prompts to set the date and time locally.
6	Choose "Use Default", then press **<Select>**, for your phone to use these default settings: • Extension Length (3) • First Extension (200)
7	Enter the first name of the Administrator, then press **<Enter>**.
8	Enter the last name of the Administrator, then press **<Enter>**.

Administrator IP Phone Registration Procedure

Step	Action
9	(Optional) Enter the Administrator email address, then press **<Enter>**. **Note:** To enter the @ symbol, press the # key until it appears on your Phone UI. You can skip this step and enter the email address later using the AastraLink Pro 160 Web UI.
10	Enter the Administrator password, then press **<Enter>**. Your Administrator phone reboots. When the startup process is complete, your Phone UI displays the IP address of the AastraLink Pro 160. Use this address to access the AastraLink Pro 160 using the Aastra Web UI.
11	Press **<Exit>** to complete the Administrator IP phone registration process.

Reinstalling System Software Using Recovery Mode

The AastraLink Pro 160 contains an automatic fail-back mode in its onboard firmware that allows the system to be recovered if it encounters a problem when booting from the CompactFlash root file system.

The AastraLink Pro 160 enters automatic "recovery mode" after a failed boot. If necessary, it is also possible for you to initiate recovery mode, by booting the system with the CompactFlash card removed (see "Manual Recovery Mode" on page 7-11 for instructions).

When the AastraLink Pro 160 is in recovery mode, you can use your web browser to access the Recovery Mode UI, which allows you to:

- Reprogram the CompactFlash card back to the default "greenfield" state, as if it were just received new from the factory.
- Reprogram the Onboard flash (firmware), using a new firmware image.
- Restore a previous *.avf* backup file onto the ComapctFlash.

Caution: Reprogram the Onboard flash under the direction of Aastra support personnel only. Incorrect usage can make the AastraLink Pro 160 unbootable, requiring the device to be returned to the factory for repair.

Automatic Recovery Mode

File system corruption is a rare event, but it can occur if a power outage or a manual reset is performed while data is being written to the file system. Normally, any corruption caused to the CompactFlash filesystem in this manner corrects itself automatically the next time the AastraLink Pro 160 boots.

However, if the CompactFlash card becomes so corrupt that it cannot be automatically repaired, the AastraLink Pro 160 boots in recovery mode. The LED alternates Green/Red/Off when the AastraLink Pro 160 is in recovery mode (rather than the usual "flashing Green" LED).

If your AastraLink is in recovery mode, proceed to "Using The AastraLink Recovery Mode UI" on page 7-12.

Manual Recovery Mode

If the AastraLink did not automatically enter Recovery Mode, but you need to reprogram the CompactFlash or Onboard flash, you can use the following procedure to manually initiate recovery mode.

AastraLink Web UI

Step	Action
1	Power off the AastraLink Pro 160.
2	Eject the CompactFlash card from the front of the system. The ejector handle folds over and may need to be extended from its recessed position before the card can be ejected.
3	Power on the AastraLink Pro 160.
4	After 30 seconds, verify that the AastraLink Pro 160 has entered recovery mode. The LED flashes a Green/Red/Off pattern when it is in recovery mode.
5	Insert the CompactFlash card, and ensure that it is fully seated in the slot.
6	To access the Recovery Mode UI, use a web browser and enter the following address: http:// < DHCP client address received on the LAN interface> **NOTE:** If you do not know the IP address of the LAN interface, see "Obtaining the IP Address of Your AastraLink Pro 160" on page 7-12. The AastraLink Recovery Mode UI appears. To set the AastraLink Pro 160 back to its factory default settings, use the procedure described "Reprogramming the CompactFlash Card" on page 7-15.

Using The AastraLink Recovery Mode UI

This section describes how you use the AastraLink Recover Mode Web UI to reload system software or firmware. To do so, you must:

- First, obtain the IP address of the AastraLink Pro 160 so you can communicate with the device.
- Second, use the Recovery Mode UI to reprogram the CompactFlash card, or Onboard flash, as necessary.

Obtaining the IP Address of Your AastraLink Pro 160

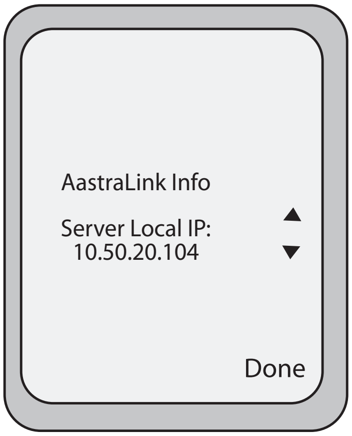
If you do not know the IP address of your AastraLink Pro 160, you can obtain the IP address of the AastraLink device using one of the methods described in this section.

For DHCP Networks

When operating in recovery mode, the AastraLink Pro 160 uses DHCP to attempt to obtain an IP address on the LAN network. If DHCP was previously being used for normal operation, and the DHCP server on the network supports MAC address caching, then the AastraLink Pro 160 uses same IP address in recovery mode as in normal operation.

You can use an Aastra IP phone to find the IP address of the AastraLink Pro 160, as described in the following procedure.

Phone UI

Step	Action
1	Press the **<Options>** key or **Options** button on your Aastra IP phone.
2	Select **Phone Status/AastraLink Info/Server Local IP** The IP address assigned to the AastraLink appears. For example:  AastraLink Info Server Local IP: 10.50.20.104
3	To access the Recovery Mode UI, use a web browser and enter the following address: http:// < DHCP client address received on the LAN interface> For example, enter: http://10.50.20.104 The AastraLink Recovery Mode UI appears. To set the AastraLink Pro 160 back to its factory default settings, use the procedure described “Reprogramming the CompactFlash Card” on page 7-15.

For non-DHCP Networks

If the AastraLink Pro 160 was not using DHCP to obtain an IP address on the LAN, then to communicate with the AastraLink, you can use a direct, back-to-back Ethernet connection between the AastraLink WAN interface and a PC.

In recovery mode, the AastraLink operates as a DHCP server for the private 192.168.100.100/24 network using the WAN port. So, when you connect the AastraLink to PC as described above, the AastraLink Recovery Mode DHCP server assigns a 192.168.100.10x address to the PC.

Once you have established communication between your PC and the AastraLink Pro 160, you then access the AastraLink Recovery UI to set the AastraLink Pro 160 back to its factory default settings

Use the following procedure to establish communication between your AastraLink Pro 160 and your PC.

Direct Connection from AastraLink WAN port to your PC

Step	Action
1	Connect an Ethernet cable from the WAN port located on the back of the AastraLink Pro 160 to the LAN port on your PC. The PC must be configured to be a DHCP client. Once you make this connection, the AastraLink Recovery Mode DHCP server assigns a 192.168.100.10x address to the PC.
2	To access the Recovery Mode UI, use a web browser and enter the AastraLink default address of 192.160.100.100. That is, enter: http://192.168.100.100 The AastraLink Recovery Mode UI appears. To set the AastraLink Pro 160 back to its factory default settings, use the procedure described “Reprogramming the CompactFlash Card” on page 7-15.

Reprogramming the CompactFlash Card

If the CompactFlash (CF) card is defective, and a replacement card needs to be programmed with a factory fresh image, you can use the Recovery Mode UI to set the AastraLink Pro 160 CompactFlash card back to its original settings

You should only reprogram the CompactFlash card if the AastraLink Pro 160 is continually entering recovery mode and will not correct itself, even after several reboot attempts.

Notes: Before starting the reprogramming procedure, note the following important information:

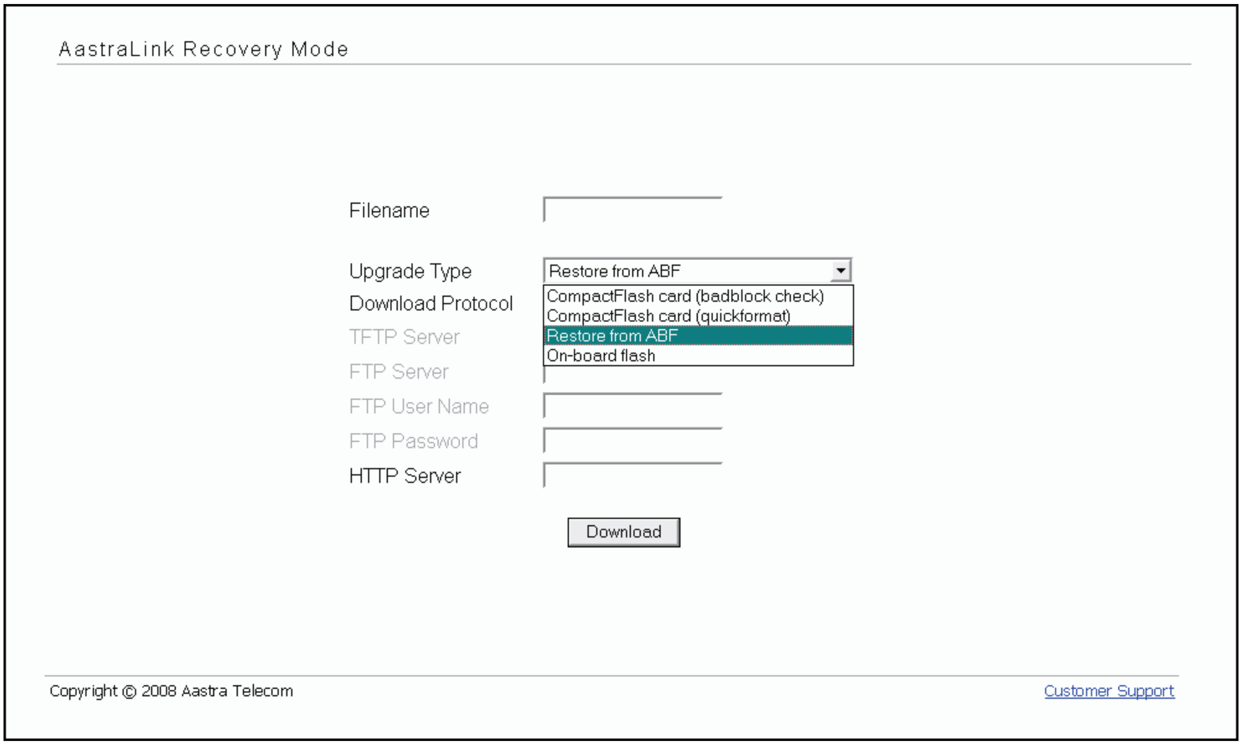
- When you reprogram the CompactFlash card, all configuration and voicemail data stored on the card is erased.
- Before you can reprogram the CompactFlash card, you must download the *vnx.dra* file from the Aastra support web site, and store the file on a TFTP, FTP, or HTTP server that is accessible to the AastraLink Pro 160

using its LAN connection.

AastraLink Recovery UI

Step	Action
1	Confirm that the AastraLink is in recovery mode. The LED should alternate Green/Red/Off to indicate that the device is in recovery mode.
2	If you have not yet accessed the AastraLink Recovery Mode UI, do this step. (Otherwise, skip ahead to Step 3.) Use your web browser and enter the IP address of the AastraLink: • If you are using DHCP, enter the IP address assigned to the device. For example: http://10.50.20.104 • If you are using a direct, back-to-back connection between the AastraLink WAN port and your PC, then enter the following address: **http://192.168.100.100** The AastraLink Pro 160 Recovery Mode UI appears, as shown in Figure 7-1.

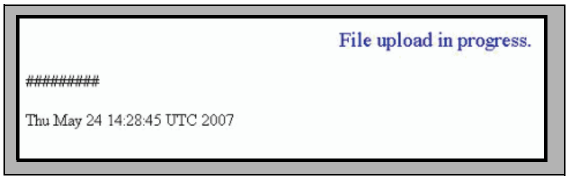
AastraLink Recovery UI

Step	Action
	 AastraLink Recovery Mode Filename Upgrade Type: Restore from ABF CompactFlash card (badblock check) CompactFlash card (quickformat) Restore from ABF On-board flash Download Protocol TFTP Server FTP Server FTP User Name FTP Password HTTP Server Download Copyright © 2008 Aastra Telecom Customer Support
3	**Example:** Enter the name of the CF image file that you downloaded from the Aastra web site in the **"Filename"** field. For example, enter: *vnx.dra* **Note:** For HTTP/FTP, you may prefix the file name with an explicit directory path to the location on the server. For example, enter: *pub/temp/firmware/vnx.dra*

AastraLink Recovery UI

Step	Action
4	Set **“Upgrade Type”** to either "**Compact Flash with badblock check**" or "**Compact Flash (quickformat)**”. The Badblock check allows the CF card to be tested for physical errors before the new firmware is loaded onto it, and takes approximately 30 to 45 minutes. The Quickformat allows the new firmware to be directly loaded, but without checking for errors, and takes approximately 8 minutes.
5	Specify the **“Download Protocol”** used by the local server as either HTTP, FTP, or TFTP.
6	Enter the IP address or DNS address of the local server, as appropriate.
7	Enter the login details required by the download protocol (if required).
8	Click **<Download Firmware>** to begin the download process. **Note:** The transfer may take up to 30 minutes to complete, depending on the network speed and connection protocol. Do *not* interrupt the transfer during this time, or the system may become unrecoverable. You will see some, or all, of the screens shown in Figure 7-2 as the process completes. When the download is complete, a status window appears indicating that you need to reboot the AastraLink Pro 160 to complete the procedure.
9	Click **<Reboot>** to reboot the AastraLink.

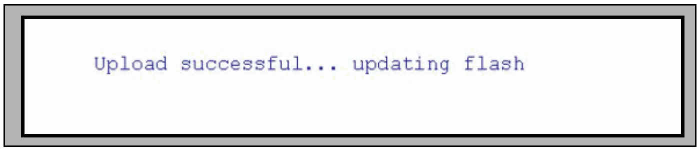
Figure 7-1. AastraLink Recovery Mode Menu



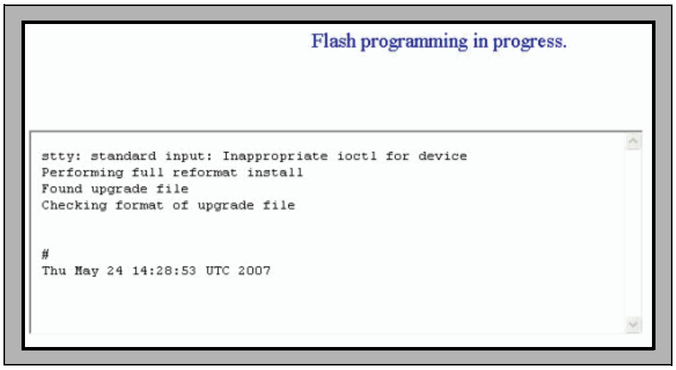
File upload in progress.

```
#########
Thu May 24 14:28:45 UTC 2007
```

Your Web Browser displays screens like these as the CompactFlash Card is reprogrammed.



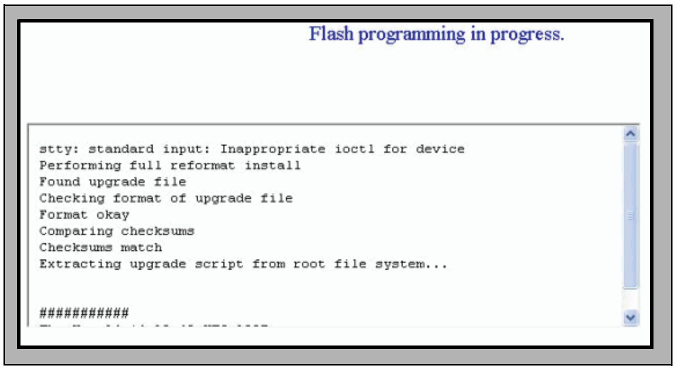
```
Upload successful... updating flash
```



Flash programming in progress.

```
stty: standard input: Inappropriate ioctl for device
Performing full reformat install
Found upgrade file
Checking format of upgrade file


#
Thu May 24 14:28:53 UTC 2007
```



Flash programming in progress.

```
stty: standard input: Inappropriate ioctl for device
Performing full reformat install
Found upgrade file
Checking format of upgrade file
Format okay
Comparing checksums
Checksums match
Extracting upgrade script from root file system...


###########
```

Figure 7-2. AastraLink Recovery Mode Download Screens

Reprogramming the Onboard Flash

When necessary, you can use the Recovery Mode UI to reprogram the AastraLink Pro 160 Onboard flash (firmware) using the procedure described in this section.

Caution: You should only reprogram the Onboard flash with direction from Aastra support personnel. Incorrect updating of the Onboard flash can make the AastraLink Pro 160 unbootable, requiring the device to be returned to the factory for repair.

Note: Before you can reprogram the Onboard flash, you must download the *obf.dra* file (see below) from the Aastra support web site, and store the file on a TFTP, FTP, or HTTP server that is accessible to the AastraLink Pro 160 using its LAN connection.

Use the following procedure to reprogram the AastraLink Pro 160 Onboard flash.

AastraLink Recovery UI

Step	Action
1	Confirm that the AastraLink is in recovery mode. The LED should alternate Green/Red/Off to indicate that the device is in recovery mode.
2	If you have not yet accessed the AastraLink Recovery Mode UI, do this step. (Otherwise, skip ahead to Step 3.) • If you are using DHCP, enter the IP address assigned to the device. For example: http://10.50.20.104 • If you are using a direct, back-to-back connection between the WAN port and your PC, then enter the following address: http://192.168.100.100 The AastraLink Pro 160 Recovery Mode UI appears. (See Figure 7-1.)

AastraLink Recovery UI

Step	Action
3	Enter the name of the Onboard flash file that you downloaded from the Aastra web site in the **"Filename"** field. For example, enter: *obf.dra* **NOTE**: For HTTP/FTP, you may prefix the file name with an explicit directory path to the location on the server. For example, enter: *pub/temp/firmware/obf.dra*
4	Set **"Upgrade Type"** to **On-board flash**.
5	Specify the **"Download Protocol"** used by the local server as either HTTP, FTP, or TFTP.
6	Enter the IP address or DNS address of the local server, as appropriate.
7	Enter the login details required by the download protocol (if required).
8	Click **<Download Firmware>** to begin the download process. **Note:** The transfer may take up to 30 minutes to complete, depending on the network speed and connection protocol. Do *not* interrupt the transfer during this time, or the system may become unrecoverable. When the download is complete, a status window appears indicating that you need to reboot the AastraLink Pro 160 to complete the procedure.
9	Click **<Reboot>** to reboot the AastraLink.

Uploading the .abf File to the CompactFlash

After reformatting the CompactFlash card to a factory-default state (either with quickformat or using the extended version with badblock checking), it is possible to restore a previous AastraLink Backup File (*.abf*) so that the system reboots into the previous configured state, rather than as a default greenfield.

Use the following procedure to upload an .abf file to the CompactFlash.

AastraLink Recovery UI

Step	Action
1	At the end of the CompactFlash card flash programming, the Web UI displays an optional link to return to the front page. Click on this link and change the '**Upgrade Type**' to '**Restore from ABF**' . This allows upload of an *.abf* file to the CompactFlash (assuming the *.abf* file is present on the TFTP/FTP/HTTP server).
2	After restoring the *.abf* file, click to reboot and allow the system to start up normally. The system configuration extracts from the uploaded *.abf* file and service resumes, with all previous voicemail and system configuration restored.

Using AastraLink System and Phone Log Files

To investigate issues specific to interoperability or configuration/operation of Aastra IP phones, the AastraLink Web UI allows you to view system and phone logs, and enable debugging for various events.

To view Aastralink system and phone log files, you must be working in conjunction with Aastra support personnel, and supply a valid login ID and debug password. Contact Aastra support for more information.

Appendix A
Remote Office Configuration of the IP Phone (Phone-Side)

Introduction

This appendix supplements the *AastraLink Pro 160 Quick Start Administrator's Guide*. It describes how to do the following tasks:

- Register a remote user IP phone at the central site prior to deployment.
- Install an IP phones at a remote site and connect to the AastraLink Pro 160 phone network. (This task can be performed by either the administrator or a user.)
- Reinstall a remote IP phone back at the central site.

Topics

This appendix covers the following topics:

Topic	Page
Preparing To Deploy Remote User Phones	page A-2
Registering IP Phones At the Central Site	page A-4
Connecting To The IP Phone Network From a Remote Office	page A-7
Reinstalling Aastra IP Phones at the Central Site	page A-13

Preparing To Deploy Remote User Phones

The administrator must do the following three steps *before* deploying Aastra IP phones to a remote site:

1. Enable remote access support on the AastraLink Pro 160, and configure remote access parameters.

   Depending on your network configuration and requirements, you may also choose to configure firewall parameters, specify port mappings, etc. prior to deploying remote user IP phones. See *"Editing Local Service Settings"* on page 4-19 of this guide for instructions.

   Note: Perform either of the following step 2 or step 3, but not both.

2. (Optional) Register the IP phones with the AastraLink Pro 160 at the central site.

   Registering the Aastra IP phones with the AastraLink Pro 160 before deployment ensures that the phones reflect the central site configuration and security parameters. See *"Registering IP Phones At the Central Site"* on page A-4.

3. (Optional) Supply remote users with the following networking information, which allows them to connect to the IP phone network at the central site:

   — IP Address of the AastraLink Pro 160.

   — HTTP port the IP phone will use to communicate with the AastraLink Pro 160 web server.

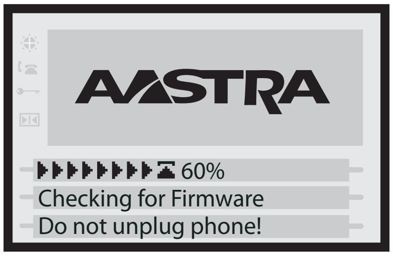
   As a security restriction to prevent unauthorized use of AastraLink Pro service, remote office IP phones cannot be registered using the external public IP address and port. The phone's MAC address must be added to the AastraLink Pro database either by pre-registering it on the local network first, or by using the <**Add Phone**> option at the location *Users->User List* in the administrator menus.

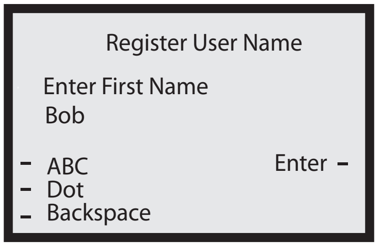
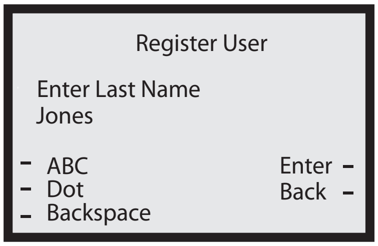
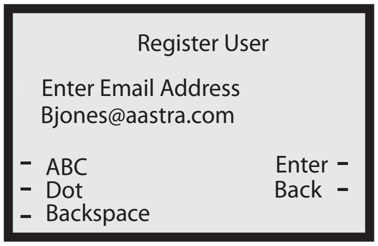
> Registering the IP phones by connecting them at the central site is the quickest and easiest method to register the lines with AastraLink Pro and ensure that the IP phone is pre-configured with the public IP address and port previously configured on the AastraLink. Using the <**Add Phone**> feature permits the IP phone to be registered, but does not pre-configure the public address information; therefore, it would be necessary for the end-user to add this at install time.

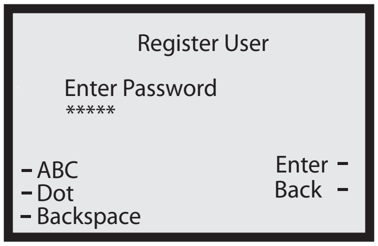
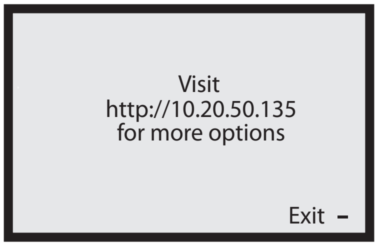
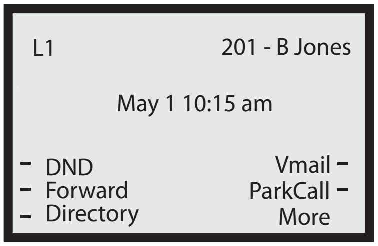
Once the administrator has completed the steps described above, then users can follow the instructions described in "Connecting To The IP Phone Network From a Remote Office" on page A-7 to install their Aastra IP phones at a remote site, and connect to the AastraLink IP phone network.

Registering IP Phones At the Central Site

Prior to remote deployment, use the instructions in this section to register an IP phone with the AastraLink device.

Step	Action
1	To begin the setup process, use the supplied RJ45 cables to connect your Aastra IP phone to your Ethernet Hub/Switch. **Note:** See your *AastraLink Pro 160 Quick Start User's Guide* for detailed instructions on setting up and installing your Aastra IP phone.
2	Connect the 48V power cord to your Aastra IP phone. **Notes:** For Ethernet networks that supply in-line power to the phone (IEEE 802.3af): - Use the Ethernet cable (supplied) to connect from the phone directly to the network. - No 48v AC power adapter required. For Ethernet networks that DO NOT supply power to the phone: - Use the 48V AC Power Adapter to connect from the DC power port on the phone to a power source. - Use the Ethernet cable (supplied) to connect from the phone to a network jack. The Aastra IP phone automatically begins the startup sequence as soon as you connect it. The Aastra IP phone checks for new configuration and firmware updates on the AastraLink device. If a new update is found, the phone displays the update it is installing (either "Updating Config" or "New Firmware"). This may take a few moments while the configuration server downloads the latest updates. **Important!** Do not unplug or remove power from the phone while it is checking and installing the firmware.  60% Checking for Firmware Do not unplug phone!

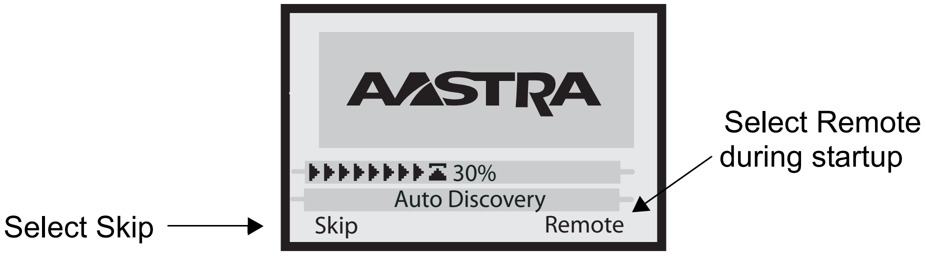
Step	Action
3	To begin the registration process, enter the first name of the IP phone user, then press <**Enter**>. For example: Bob  Register User Name Enter First Name Bob – ABC – Dot – Backspace Enter –
4	Enter the last name of the IP phone user, then press <**Enter**>. For example: Jones  Register User Enter Last Name Jones – ABC – Dot – Backspace Enter – Back –
5	(optional) Enter the email address of the IP phone user, then press <**Enter**>.  Register User Enter Email Address Bjones@aastra.com – ABC – Dot – Backspace Enter – Back – **Note:** To enter the @ symbol, press the # key until the symbol appears.

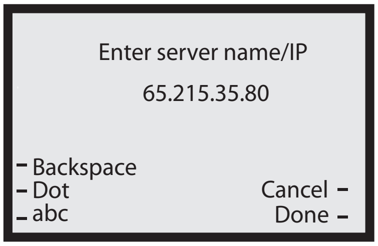
Step	Action
6	Enter the user password, then press <**Enter**>.  Register User Enter Password ***** ABC Dot Backspace Enter Back Your IP phone reboots. When startup is complete, your phone UI displays the IP address of the Aastralink device. To access the AastraLink Web UI, you enter the address in your web browser.  Visit http://10.20.50.135 for more options
7	To complete the initialization process, press <**Exit**>. The IP phone Idle screen appears. It shows the user name, extension, date, and the default softkeys configured for the user's phone (large screen displays only).  L1 201 - B Jones May 1 10:15 am DND Forward Directory Vmail ParkCall More

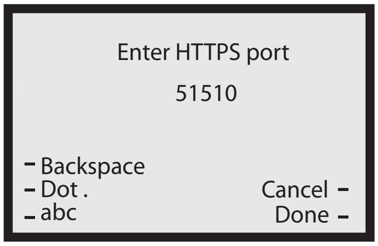
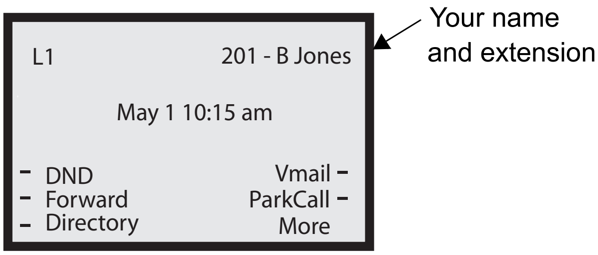
Connecting To The IP Phone Network From a Remote Office

After registering the IP phone at the central site, use the following procedure to connect to the IP phone network from a remote office.

Warning: On remote phones connected to the AastraLink Pro 160, the following emergency related message displays: **"E911 calls are not available from this phone."** Remote IP phone users should **not** make emergency calls using the AastraLink Pro 160, because the location information will be incorrect. E911 regulations in the United States require street address location information be transmitted to the Public Safety Answering Point (PSAP). This information is provided by the telco, using the location of the analogue line connected to the AastraLink Pro 160 Lifeline port (FXO Line 1).

Step	Action
1	Connect the Aastra IP phone to your Ethernet Hub/Router. **Note:** See your *AastraLink Pro 160 Quick Start User's Guide* for instructions on setting up and installing your Aastra IP phone. Your Aastra IP phone powers up, completes its diagnostics, and searches for the AastraLink Pro 160 on the network.
2	Select <**Remote**> to specify that this is a remote IP phone.  AASTRA 30% Auto Discovery Skip Remote Select Skip Select Remote during startup **Note:** If for some reason the IP phone is unable to obtain an IP address, then the IP phone UI displays the message "UPnP Device Not Found." If you see this message, skip ahead to the following section "Configuring Port Information" on page A-10 for instructions.

Step	Action
3	Enter the IP Address of the AastraLink Pro 160 that is located at the central site. For example: `65.215.35.80`  Enter server name/IP 65.215.35.80 **Note:** If you do not know the IP address of the AastraLink Pro 160, check with your administrator.

Step	Action
4	Specify the HTTP port the IP phone uses to communicate with the AastraLink Pro 160. For example: 51510  Enter HTTPS port 51510 Your Aastra IP phone downloads the latest configuration information from the AastraLink Pro 160 and reboots. When the Idle State Screen appears showing your user name and extension (like the one below), the registration process is complete.
5	Your Aastra IP phone connects to the IP phone network at the central site and is fully operational.  L1 201 - B Jones May 1 10:15 am Your name and extension Your IP phone only successfully connects to the AastraLink Pro if its MAC address is pre-provisioned in the Users List at the location *User->User List* in the administrator menus.

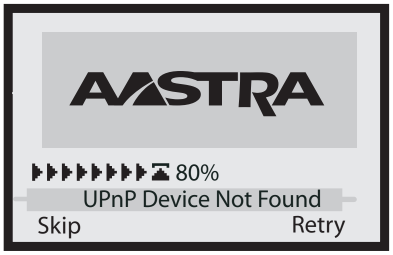
Configuring Port Information

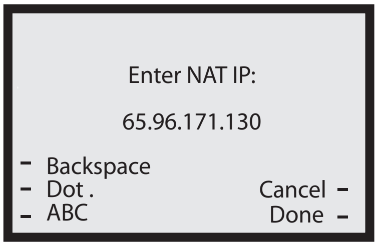
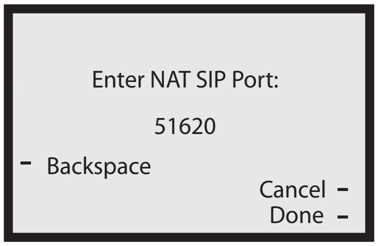
Not all routers support Universal Plug & Play (UPnP), and some may need to have the UPnP support manually enabled. If the Aastra IP phone cannot obtain the public IP address of the router via UPnP, the phone displays the message "*UPnP device not found*." This condition most often occurs if:

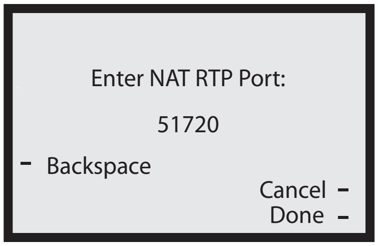
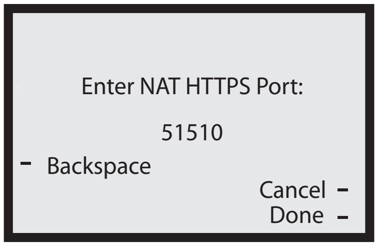
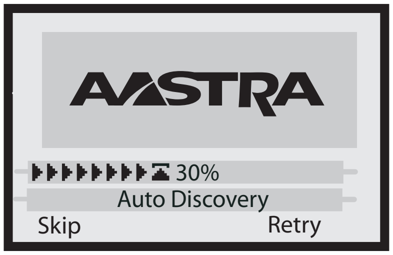
- The remote Aastra IP phone is not installed behind a UPnP enabled router, or
- The Aastra IP phone cannot set up minimal port mappings (for example, if you have multiple devices connected to your router).

So, in order for the Aastra IP phone to communicate with the AastraLink Pro 160, you must use the instructions in this section to manually enter the port mapping information that is configured on your router.

Note: If you do not know the port mappings configured on your router, then refer to your router documentation for more information.

Step	Action
1	If your IP phone UI displays the "UPnP Device Not Found" message shown below, press <**Skip**> to begin manually configuring port mapping parameters.  80% UPnP Device Not Found

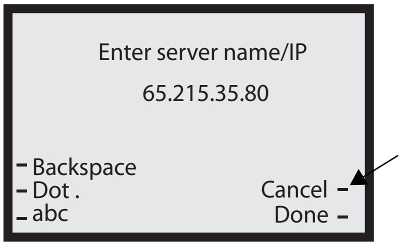
2	Specify the public IP address, or dynamic/static DNS FQDN of your router, then press <**Done**>. For example: 65.96.171.130.  Enter NAT IP: 65.96.171.130 Backspace Dot . ABC Cancel Done
3	Specify the public SIP port (default 51620) for your router, then press <**Done**>.  Enter NAT SIP Port: 51620 Backspace Cancel Done

4	Specify the public RTP starting port (default 51720) for your router, then press <**Done**>.  Enter NAT RTP Port: 51720
5	Specify the public HTTP port (default 51510) for your router, then press <**Done**>.  Enter NAT HTTPS Port: 51510 Your AastraLink IP Phone reboots and begins the discovery process. Now, go back to the previous section entitled "Connecting To The IP Phone Network From a Remote Office" on page A-7 and complete steps 2-4 to complete the remote registration procedure.  30% Auto Discovery

Reinstalling Aastra IP Phones at the Central Site

Use the procedure described in this section to reinstall an IP phone at the central site that had been previously installed at a remote office.

The procedure described below resets the IP phone from “remote mode” to back to “local mode.” If you do not reset the IP phone, it will attempt to boot in remote mode when you install it.

Step	Action
1	Connect the Aastra IP phone to your Ethernet Hub/Router. **Note:** See your *AastraLink Pro 160 Quick Start User’s Guide* for instructions on setting up and installing your Aastra IP phone.
2	Select **<Cancel>** when the IP phone UI prompts you to specify the IP address of the AastraLink at your central site.  Enter server name/IP 65.215.35.80 Select Cancel
3	Press the **<Options>** key or button on your IP phone.
4	Use the arrow keys to view the options, then select **<Factory Default>**
5	Press **<Show>**
6	Enter the administrator password, then press **<Enter>**
7	Select **<Default>** when prompted to “Reset Phone Back to Factory Defaults.”

Step	Action
8	Select **<Restart>** when prompted to restart the phone. The IP phone reverts back to its factory default settings.
9	Disconnect, then reconnect, your IP phone to your Ethernet Hub/Router. If your IP phone has been successfully reset to “local mode,” it should start up, retrieve its configuration from the AastraLink, and then prompt you to specify a user name. You can then continue to register the IP phone as describe in the section “Registering IP Phones At the Central Site” on page A-4.

Appendix B
Remote Office Configuration of the AastraLink Pro 160 (Server-Side)

Introduction

This appendix provides a procedure for manually setting up your AastraLink Pro 160 in your network for a remote office connection.

Topics

This appendix covers the following topics:

Topic	Page
Remote Office Configuration of the AastraLink Pro 160	page B-2
Network Diagram for Remote Phone Setup	page B-2
Configuring the AastraLink Pro 160 for Remote Office Setup	page B-4
AastraLink Pro 160 Manual Remote Office Configuration Example	page B-9

Remote Office Configuration of the AastraLink Pro 160

Description

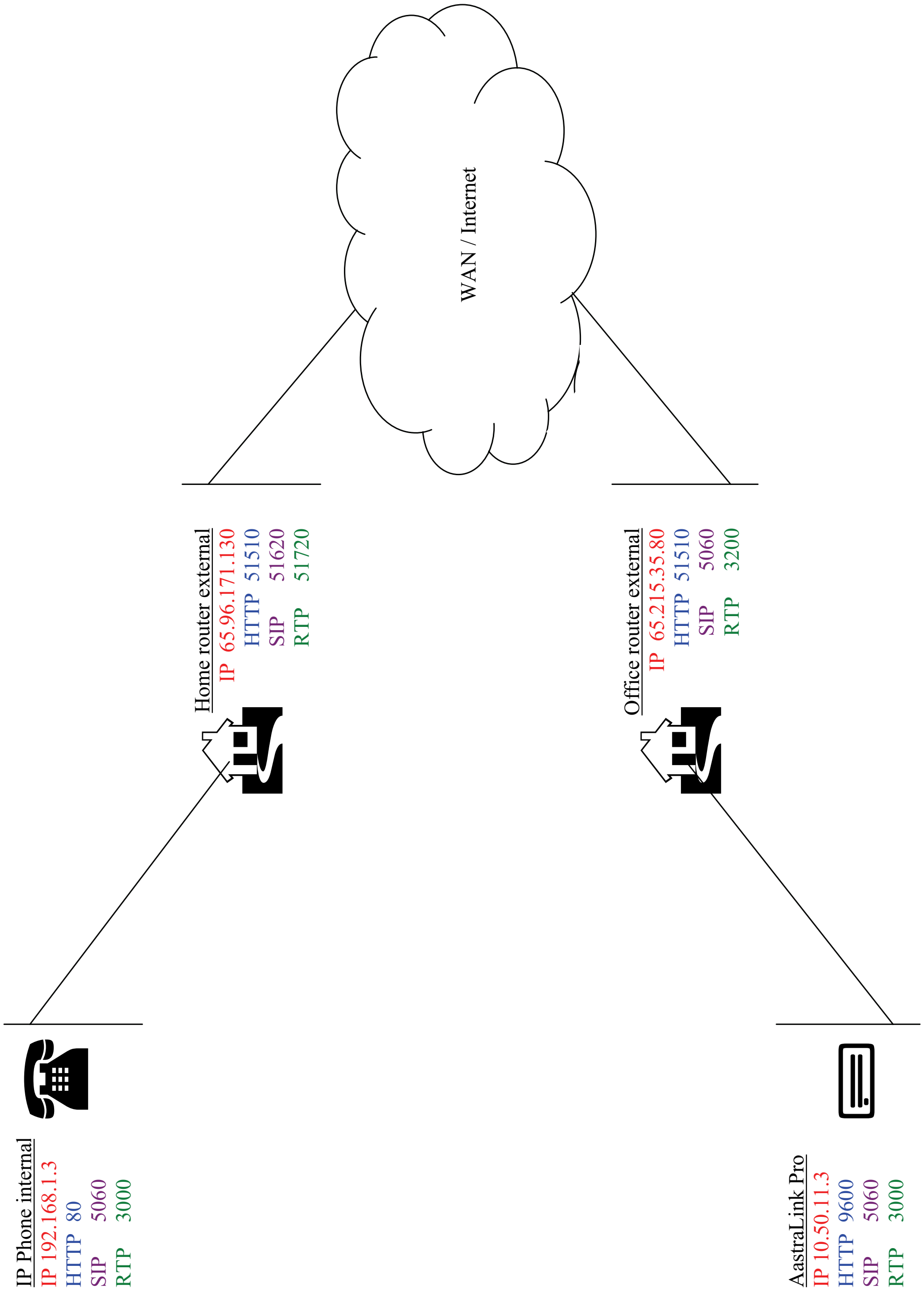
The AastraLink Pro 160 is a plug and play unit that you can install in your network. However, to configure the AastraLink Pro 160 for remote office connections, it is recommended you use the information that this Appendix provides.

Network Diagram for Remote Phone Setup

The following is a network diagram for Aastralink Pro 160 remote phone setup. When setting up remote office, the user has the option to configure the required port forwarding on the phone-side router or the server-side router automatically, by employing UPnP for UPnP capable routers.*

If UPnP is not supported on the routers, you can manually enter the required port forwarding mappings on the router. Please consult the router's manual for procedure to enter and activate port forwarding rules.

***SOHO router should support NAT, port forwarding, and optionally UPnP.**

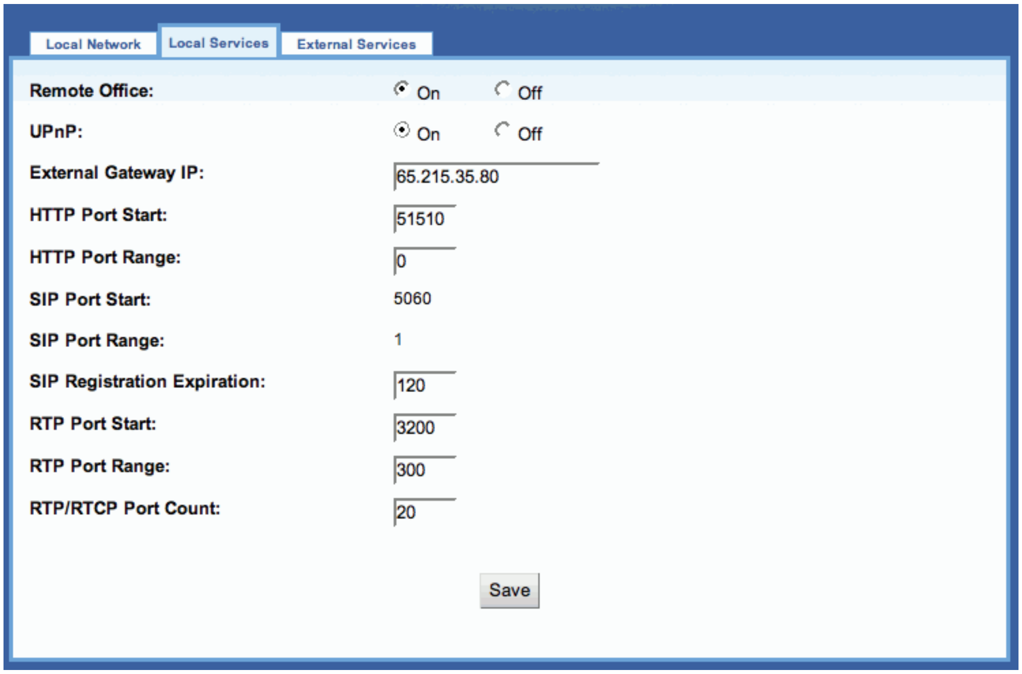

WAN / Internet
Home router external
IP 65.96.171.130
HTTP 51510
SIP 51620
RTP 51720
Office router external
IP 65.215.35.80
HTTP 51510
SIP 5060
RTP 3200
IP Phone internal
IP 192.168.1.3
HTTP 80
SIP 5060
RTP 3000
AastraLink Pro
IP 10.50.11.3
HTTP 9600
SIP 5060
RTP 3000

Configuring the AastraLink Pro 160 for Remote Office Setup

1. UPnP Configuration

Use the following procedure to configure UPnP on the AastraLink Pro 160.

AastraLink Web UI

Step	Action
1	Select **Configuration->Network->Local Services.**  Local Network | Local Services | External Services **Remote Office:** ● On ○ Off **UPnP:** ● On ○ Off **External Gateway IP:** 65.215.35.80 **HTTP Port Start:** 51510 **HTTP Port Range:** 0 **SIP Port Start:** 5060 **SIP Port Range:** 1 **SIP Registration Expiration:** 120 **RTP Port Start:** 3200 **RTP Port Range:** 300 **RTP/RTCP Port Count:** 20 Save
2	Turn on “**Remote Office**”.

AastraLink Web UI

Step	Action
3	Turn on “**UPnP**”.
4	Click **<Save>** to save your changes. After a successful UPnP with the AastraLink Pro 160, the results are shown in the “**Office Router Port Mapping Table**” on page B-5. **Notes**: **1.** The external gateway IP (router A wan side IP address) of router A is automatically populated to the server. **2.** HTTP port, SIP port, and RTP ports mappings (map router A wan side TCP/UDP ports to the server TCP/UDP ports) are set up on router A automatically according to the default value defined on the server's local server page.

Office Router Port Mapping Table

Active	Protocol	Internal Port	External Port	IP Address
YES	UDP	5060	5060	10.50.11.3
YES	UDP	9600	51510	10.50.11.3
YES	UDP	3000	3200	10.50.11.3
YES	UDP	3001	3201	10.50.11.3
YES	UDP	3002	3202	10.50.11.3
YES	UDP	3003	3203	10.50.11.3
YES	UDP	3004	3204	10.50.11.3
YES	UDP	3005	3205	10.50.11.3
YES	UDP	3006	3206	10.50.11.3
YES	UDP	3007	3207	10.50.11.3
YES	UDP	3008	3208	10.50.11.3
YES	UDP	3009	3209	10.50.11.3
YES	UDP	3010	3210	10.50.11.3
YES	UDP	3011	3211	10.50.11.3

Active	Protocol	Internal Port	External Port	IP Address
YES	UDP	3012	3212	10.50.11.3
YES	UDP	3013	3213	10.50.11.3
YES	UDP	3014	3214	10.50.11.3
YES	UDP	3015	3215	10.50.11.3
YES	UDP	3016	3216	10.50.11.3
YES	UDP	3017	3217	10.50.11.3
YES	UDP	3018	3218	10.50.11.3
YES	UDP	3019	3219	10.50.11.3

Column Descriptions

Column	Description
Active	Indicates whether or not the Office Router port mapping is active.
Protocol	Indicates the protocol currently being used on the Office Router port during mapping.
Int. Port	TCP/UDP ports open on AastraLink
Ext. Port	TCP/UDP ports open on t he WAN side of Route A and ready to forward packets to the AastraLink ports in the mapping.
IP Address	AastraLink's IP address

2. Phone Configuration

If you create an account on the server for the phone in the same subnet as the server, the configuration automatically downloads to the phone.

If you create the phone's account on the server using the Web UI to add phones, the remote phone does not have the configuration required to initiate communication with the server. Users must enter the server's external gateway IP and HTTP port from the phone's TUI prompt upon remote installation.

3. Remote Phone Installation

Pre-stage phone

Press **<Remote>** when the Auto-Discovery screen is presented in TUI.

Non Pre-stage phone

Press **<Remote>** and enter the external gateway IP (e.g. 65.215.35.80) and HTTP port start (e.g. 51510) when TUI prompts.

Upon a successful dialogue with the server and with the pre-configuration or downloaded configuration, the phone automatically initiates port mapping setups with Home Router using UPnP.

The following table is the port mapping table after a successful UPnP session with the phone-side Home Router.

Home Router Port Mapping Table

	Action	Name	Source	Destination	Protocol
☑	Allow		WAN, *	LAN, 192.168.1.3	UDP, 5060-51620
☑	Allow		WAN, *	LAN, 192.168.1.3	TCP, 80-51510
☑	Allow		WAN, *	LAN, 192.168.1.3	UDP, 3000-51720
☑	Allow		WAN, *	LAN, 192.168.1.3	UDP, 3001-51721
☑	Allow		WAN, *	LAN, 192.168.1.3	UDP, 3002-51722
☑	Allow		WAN, *	LAN, 192.168.1.3	UDP, 3003-51723
☑	Allow		WAN, *	LAN, 192.168.1.3	UDP, 3004-51724
☑	Allow		WAN, *	LAN, 192.168.1.3	UDP, 3005-51725

	Action	Name	Source	Destination	Protocol
☑	Allow		WAN, *	LAN, 192.168.1.3	UDP, 3006-51726
☑	Allow		WAN, *	LAN, 192.168.1.3	UDP, 3007-51727
☑	Allow		WAN, *	LAN, 192.168.1.3	UDP, 3008-51728
☑	Allow		WAN, *	LAN, 192.168.1.3	UDP, 3009-51729
☑	Deny	Default	* , *	LAN, *	*, *
☑	Allow	Default	LAN, *	* , *	* , *

Column Descriptions

Column	Description
Action	Indicates whether or not the phone is allowed to Ping the WAN port. Valid values are Allow and Deny.
Name	Indicates a name for the port mapping.
Source	Source of the port mapping (WAN or LAN)
Destination	Phone IP address
Protocol	Protocol used for the port mapping. • Phone UDP/TCP port open (3000, 3001,...) • Home Router WAN-side UDP/TCP open (51720, 51721,...etc. These ports are ready to forward the packets to the corresponding phone ports in the mapping.

AastraLink Pro 160 Manual Remote Office Configuration Example

The following is an example of setting up the AastraLink Pro 160 for a remote office.

Notes:
1. The SIP and HTTP ports both require one mapping only. The RTP ports require a range of 10 ports per phone.

2.The number of phones you can install behind the same SOHO router is limited by the available port mapping entries on the routers. In many cases, they are sufficient for three phones behind the same routers.

AastraLink Pro 160 Remote Office Configuration

Step	Action
Configure the AastraLink Pro 160	
1	Turn on remote office.
2	Enter the external gateway IP address.
3	(Optional) Modify the settings in the local services as applicable to your network.
4	Click **<Save>**.
Configure Port Forwarding	
5	Manually setup the required port forwarding on the Office Router and Home Router. **Note:** Refer to the Office Router Port Map settings on page B-5, and Home Router Port Map settings on page B-7.
Configure the Remote IP Phone	
6	Configure the IP Phone as described in “2. Phone Configuration” on page B-6.

AastraLink Pro 160 Remote Office Configuration

Step	Action
Install the Remote IP Phone (Pre-Stage Phone)	
7	Press **<Remote>** when remote phone is in the Auto-Discovery screen. If the phone cannot find a UPnP enabled device, it displays "*UPnP device not found*". Press **<Skip>**. The phone prompts for the NAT IP address.
8	Enter the Home Router WAN-side IP address. For example: 65.96.171.130 The phone prompts for the SIP port.
9	Enter the SIP port for the Home Router. For example, you can enter 51620. The Phone prompts for an RTP port.
10	Enter the RTP port for the Home Router. For example, you can enter 51720. The Phone prompts for an HTTPS port.
11	Enter the HTTPS port for Home Router. For example, you can enter 51510.
Install the Remote IP Phone (Non-pre-Stage Phone)	
12	Press **<Remote>** and enter the server external gateway IP address (for example, 65.215.35.80). The Phone prompts for an HTTP port.
13	Enter the HTTP port start (for example, 51510). The Phone prompts for a NAT IP address.
14	Enter the Home Router WAN-side IP address. The phone prompts for the SIP port.
15	Enter the SIP port for the Home Router. For example, you can enter 51620. The Phone prompts for an RTP port.

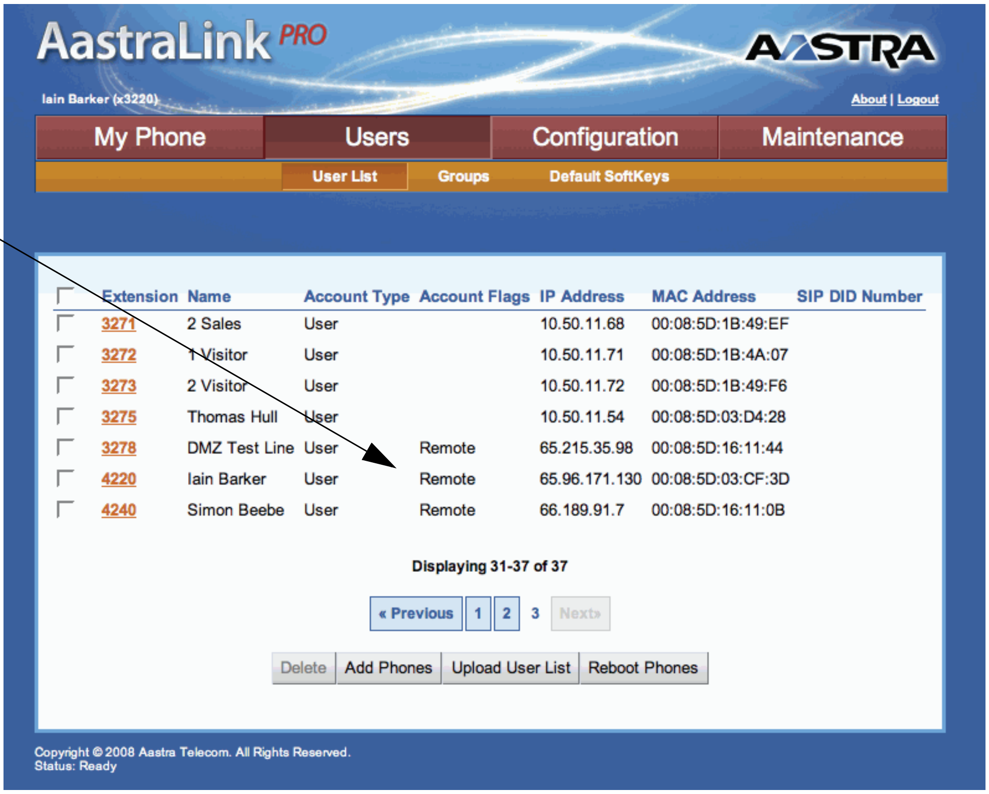
AastraLink Pro 160 Remote Office Configuration

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>16</td><td>Enter the RTP port for the Home Router. For example, you can enter 51720.

The Phone prompts for an HTTPS port.</td></tr>
<tr><td>17</td><td>Enter the HTTPS port for the Home router. For example, you can enter 51510.

After the phone reboots into service, the Users List shows it as a remote device.

Remote Device


AastraLink PRO
AASTRA
Iain Barker (x3220)
About | Logout
My Phone
Users
Configuration
Maintenance
User List
Groups
Default SoftKeys

<table>
<tr><th>☐</th><th>Extension</th><th>Name</th><th>Account Type</th><th>Account Flags</th><th>IP Address</th><th>MAC Address</th><th>SIP DID Number</th></tr>
<tr><td>☐</td><td>3271</td><td>2 Sales</td><td>User</td><td></td><td>10.50.11.68</td><td>00:08:5D:1B:49:EF</td><td></td></tr>
<tr><td>☐</td><td>3272</td><td>1 Visitor</td><td>User</td><td></td><td>10.50.11.71</td><td>00:08:5D:1B:4A:07</td><td></td></tr>
<tr><td>☐</td><td>3273</td><td>2 Visitor</td><td>User</td><td></td><td>10.50.11.72</td><td>00:08:5D:1B:49:F6</td><td></td></tr>
<tr><td>☐</td><td>3275</td><td>Thomas Hull</td><td>User</td><td></td><td>10.50.11.54</td><td>00:08:5D:03:D4:28</td><td></td></tr>
<tr><td>☐</td><td>3278</td><td>DMZ Test Line</td><td>User</td><td>Remote</td><td>65.215.35.98</td><td>00:08:5D:16:11:44</td><td></td></tr>
<tr><td>☐</td><td>4220</td><td>Iain Barker</td><td>User</td><td>Remote</td><td>65.96.171.130</td><td>00:08:5D:03:CF:3D</td><td></td></tr>
<tr><td>☐</td><td>4240</td><td>Simon Beebe</td><td>User</td><td>Remote</td><td>66.189.91.7</td><td>00:08:5D:16:11:0B</td><td></td></tr>
</table>

Displaying 31-37 of 37

« Previous 1 2 3 Next»
Delete
Add Phones
Upload User List
Reboot Phones

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Status: Ready
</td></tr>
</table>

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Administrator Guide

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